

Gila National Forest Travel Management

Inventoried Roadless Areas and Wilderness Study Areas Report

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Inventoried Roadless Areas (IRAs)

Affected Environment

In 1964 when Congress passed the Wilderness Act creating the National Wilderness Preservation System, the Act directed the Secretary of Agriculture to complete a study of 34 administratively designated “primitive areas” and determine their suitability as Wilderness by September 2, 1974.

In 1971 the Forest Service expanded the scope of the review to include all roadless areas in the inventory and evaluation. This process was known as the Roadless Area Review and Evaluation (RARE). The Final Environmental Impact Statement (FEIS) for RARE was completed and released in 1973. The FEIS identified 247 roadless areas to be studied further for possible wilderness status as part of the multiple-use planning process used at the time. The National Forest Management Act of 1976 (NFMA) replaced that process with the requirement for an integrated Land and Resource Management Plan (LRMP) for each forest and grassland.

Inventoried Roadless Areas (IRAs) were authorized by the 2001 Roadless Area Conservation Rule, 36 CFR Part 294. The “inventoried” part of the name comes from the Roadless Area Review and Evaluation (RARE) forests conducted in the 1970s and 1980s described above. The characteristics that follow describe attributes considered when areas were inventoried for roadless area designation under RARE:

- Natural, being substantially free from the effect of modern civilization.
- Undeveloped, having little or no permanent improvements or human habitation.
- Outstanding opportunities for solitude or primitive and unconfined recreation.
- Special features and values, or the potential to contribute to unique fish, wildlife and plant species and communities; outstanding landscape features; and significant cultural resource sites.
- Manageability, meaning the area is at least 5,000 acres in size.

The Roadless Area Conservation Final Rule prohibits road construction, reconstruction, and timber harvest, except under certain circumstances, in Inventoried Roadless Areas because they have the greatest likelihood of altering and fragmenting landscapes, resulting in immediate long term loss of roadless area values. Roads and motorized trails can be present within IRAs. The Roadless Rule does not prohibit travel on existing roads or motorized trails.

Approximately 22 percent of the forest’s land mass is located within 29 individual Inventoried Roadless Areas. See Figure 1. Table 1 below lists acres of each IRA located on the forest, Semi-Primitive Recreation Opportunity Setting (ROS), miles of existing Road in each IRA, and those with a segment of the Continental Divide National Scenic Trail (CDNST) located in each IRA which provide Primitive (P), Semi-Primitive Non-Motorized (SPNM), and Semi-Primitive Motorized (SPM) Recreation Opportunities. The miles of road column includes miles of road open to the public for each alternative including unauthorized and Maintenance Level 1 - ML-1 (closed) routes proposed to be maintained as part of the road system.

The Gila National Forest’s GIS inventory shows that there are 734,384 acres of Inventoried Roadless Area on the Forest. As discussed below in Analysis Methods, this figure differs from the official acres listed in Table 1.

A mix of Semi-Primitive Non-Motorized and Semi-Primitive Motorized opportunities within specific IRAs are provided on the Continental Divide Scenic Trail (CDNST). As described in the Motorized Routes and National Scenic and Recreation Trail section in the Recreation Specialists Report, 42.3 miles

of the CDNST are located within the following IRAs: Gila Box; Meadow Creek; Contiguous to the Gila Wilderness; Contiguous to the Black and Aldo Leopold Wilderness; Dry Creek; Poverty Creek; Wahoo; and Stone Creek IRAs. Currently 2.9 miles of the CDNST is located on roads open to motorized travel. These roads, open to all vehicle types, are located in the Gila Box, Wahoo Mountain, and Wagon Tongue IRAs. See Appendix A Table IRA A13. of this document. The Forest Plan designates 678,788 acres located within IRAs as Semi-Primitive Recreation Opportunity Setting (ROS). See Table 1 below. Semi-Primitive is defined as an area characterized by moderate opportunity for solitude in a predominantly unmodified natural environment with a moderate degree of trail maintenance.

The Headwaters of the San Vincente Draw (formally known as the Silver City Watershed) is located within the Meadow Creek IRA. Off road travel is currently restricted within this watershed, the Hub IRA, and a portion of the Lower San Francisco IRA/WSA.

The following analysis includes all 29 IRAs located on the Gila National Forest. The Hell Hole and Lower San Francisco IRAs encompass the Hell Hole and Lower San Francisco Wilderness Study Areas (WSAs). Effects to the Roadless Characteristics with a narrower focus on these River corridor WSAs are also analyzed within the WSA section of this document.

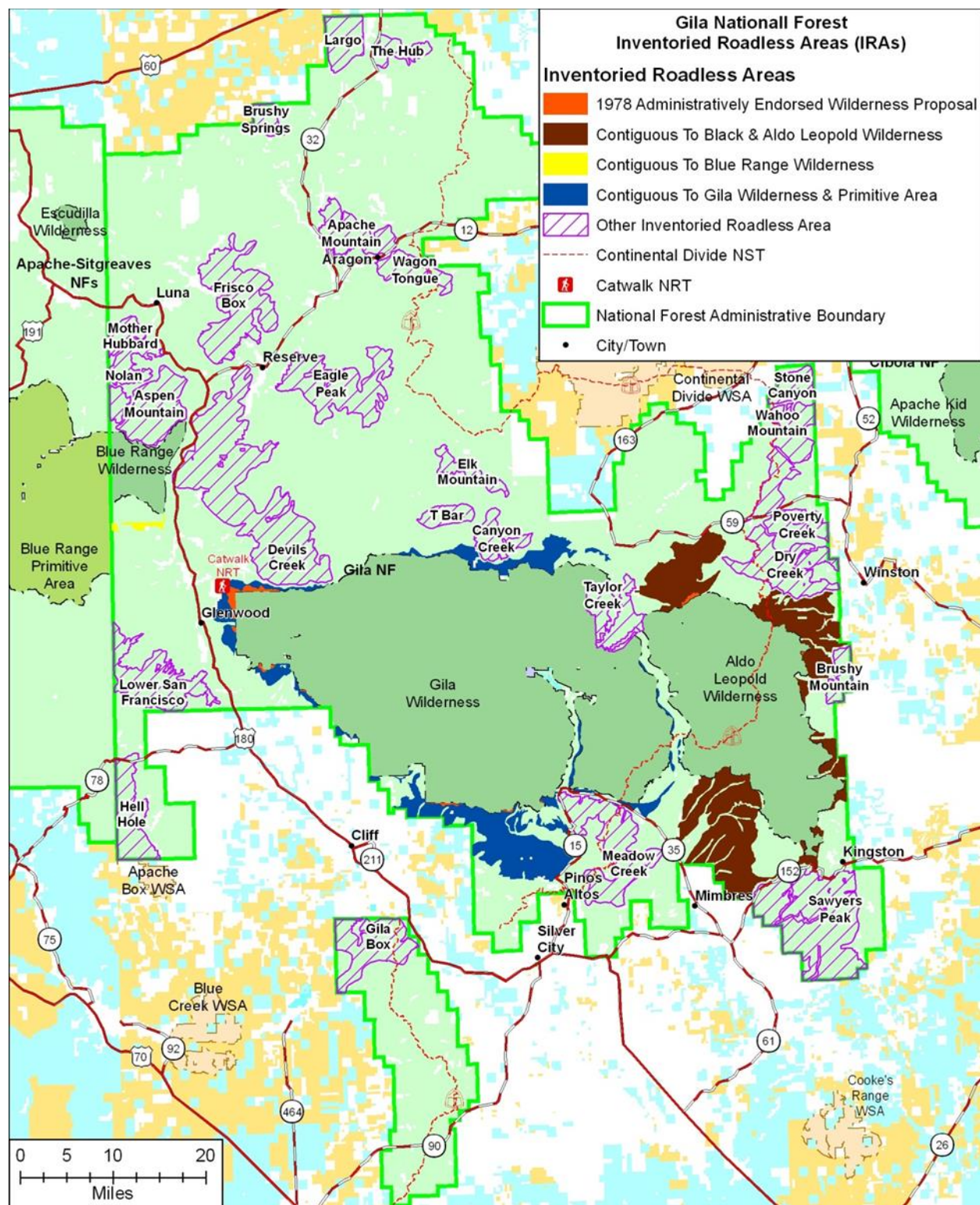


Figure 1. Inventoried roadless areas, Gila National Forest

Table 1. Inventoried roadless areas, Gila National Forest

Inventoried Roadless Areas	Official Acres (Albers) ⁽¹⁾	ROS Acres Semi- Primitive Forest Plan	Miles of Existing System Road	Miles of CDNST providing P, SPNM, and SPM ROS
1978 Administratively Endorsed Wilderness Proposal	4,286	0	.7	0.0
Apache Mountain	17,506	14,305	19.4	0.0
Aspen Mountain	23,783	17,808	14.8	0.0
Brushy Mountain	7,199	7,890	1.5	0.0
Brushy Springs	5,735	5,790	11.7	0.0
Canyon Creek	9,824	7,285	7.8	0.0
Contiguous to Black & Aldo Leopold Wilderness	111,811	72,465	45.3	4.6
Contiguous to Blue Range Wilderness	1,980	10,795(2)	3.7	0.0
Contiguous to Gila Wilderness and Primitive Area	79,048	72,465	59.2	.6
Devils Creek	89,915	87,095	44.3	0.0
Dry Creek	26,719	29,560	6.7	7.8
Eagle Peak	34,016	20,075	4.5	0.0
Elk Mountain	6,550	4,475	3.6	0.0
Frisco Box	38,977	38,100	6.7	0.0
Gila Box	23,759	24,350	5.3	6.5
Hell Hole	19,553	18,860	10.9	0.0
Largo	12,730	13,110	7.7	0.0
Lower San Francisco	26,459	25,560	17.6	0.0
Meadow Creek	34,167	34,000	17.5	0.0
Mother Hubbard	5,895	6,090	1.9	0.0
Nolan	13,050	10,800	4.3	0.0
Poverty Creek	8,770	10,260	2.5	0.0
Sawyers Peak	59,743	64,200	14.6	0.0
Stone Canyon	6,801	7,340	8.5	.8
T Bar	6,823	8,890	1.4	0.0
Taylor Creek	16,639	6,130	15.9	0.0
The Hub	7,498	7,770	5.0	0.0
Wagon Tongue	11,411	7,560	5.0	3.7
Wahoo Mountain	23,121	22,080	15.9	7.9
TOTAL	733,836	678,788	372.7	42.3

(1) The official acres are calculated using Albers. GIS acres utilized in this analysis were calculated using NAD 83 UTM Zone 12. See Analysis methods below.

(2) Figure 1 illustrates that the Contiguous to the Blue Range Wilderness IRA (Yellow on map) is not contiguous to the Blue Range Wilderness boundary on the ground. When the maps were drawn delineating and designating the boundary for the Blue Range Wilderness it separated the Wilderness from the Contiguous to the Blue Range Wilderness IRA boundary. That is why the figures in Table 1 show the Semi-Primitive ROS acreages exceeding the acreages shown for the Contiguous to the Blue Range Wilderness IRA, the area north of the IRA and south of the Blue Range Wilderness boundary is included in the Semi-Primitive ROS acreages.

Proposed Changes to Motorized Access within IRAs by Alternatives

Each Action Alternative proposes a combination of changes to the motorized route system that results in a net reduction of road mileages within IRAs. Data Tables utilized for this analysis are located in Appendix A of this document. The discussion below uses this data to show the differences in the combination of the proposed routes, corridors, and areas within IRAs on the forest for each Alternative.

Alternative B

Of the 4,572.6 miles of motorized road routes open to the public on the Gila National Forest, 362.1 miles (0.08 percent) of NFS roads are within boundaries of IRAs. All 29 IRAs have some road mileages associated with them. Contiguous to the Gila Wilderness & Primitive Area, Contiguous to Black & Aldo Leopold Wilderness, and Devil's Creek IRAs contain the most road mileage. See Table IRA A3 in Appendix A of this report.

Of the 362.1 miles of NFS roads that lie within these Roadless Areas, there is an additional 8 miles of county roads and 2.5 miles of State highways segments that provide motorized access within IRAs. No designation changes are proposed to county roads or State highways in any of the Action Alternatives. Ninety seven percent of the forest roads located within IRAs are low volume, Maintenance Level 2 (ML-2) Roads. Cross-country travel is currently allowed within all IRAs providing opportunities for Motorized Dispersed Camping (MDC) and Motorized Big Game Retrieval (MBGR).

Alternative C

Of the 4,233.7 miles of motorized road routes open to the public on the Gila National Forest in this Alternative, 297 miles of NFS roads are within boundaries of IRAs. Roads within IRAs total 307 miles in Alternative C when including state and county roads.

This Alternative proposes 52.4 miles of motorized trail opportunities within IRAs. This is a decrease of 65 miles of motorized road and an increase of 51.1 miles of motorized trail. There are 63.5 miles of NFS non-motorized trail and unauthorized trail routes proposed to maintain as single track motorcycle trail routes within IRAs. There are 0.14 miles of unauthorized routes proposed to maintain for periodic administrative use or by written authorization only; 0.04 located within the Poverty Creek IRA and 0.10 miles within the Wahoo Mountain IRA. There are 0.28 miles of unauthorized route to maintain as NFS roads and open to all vehicles located within the Stone Canyon IRA. This Alternative proposes to maintain 1.10 Maintenance Level 1 (ML-1) (closed roads) on the NFS Road system located within the Contiguous to the Gila Wilderness & Primitive Area IRA.

Alternative C proposes the most miles and acres of MDC, 85 miles/6,615 acres and MBGR, 307.2 miles/461,827 acres. The one mile corridor on each side of designated routes for MBGR is proposed for elk, deer, bear, mountain lion, javalina, and pronghorn. Since all successful hunters will not have hunted within an IRA and not all use motorized modes of transportation to retrieve their game, the maximum number of trips is estimated to be less than the forest total of 3,205 trips. Alternative C also proposes 0.97 acres of motorized area located within the Contiguous to Black & Aldo Leopold Wilderness Study Area. These areas, WA2, WA25, WA26, and WA27 are located on the Wilderness Ranger District in the McKnight, Kelly Mesa, and Dutchman areas. These proposed areas currently receive motorized use to access dispersed campsites and would be designated to provide motorized access to dispersed campsites. See FEIS Alternative Maps for locations and the Table in FEIS Chapter 2 displaying areas open to all vehicle types with legal descriptions, acres and associated road.

Alternative D

Of the 2,943.3 miles of motorized road routes open to the public on the Gila National Forest in this Alternative, 198.1 miles of NFS roads are located within boundaries of IRAs. Roads within IRAs total 208.6 miles when including county and state roads..

This Alternative proposes 9 miles of motorized trail opportunities within IRAs open to the public and 4.3 miles NFS trail for periodic administrative use or by written authorization only. This is a decrease of 163.9 miles of motorized road and an increase of 4.5 miles of motorized trail open to the public within IRAs. This alternative proposes 0.81 miles of unauthorized routes to maintain as open to motorized travel within the following IRAs; Contiguous to the Black & Aldo Leopold Wilderness 0.13 miles; Lower San Francisco 0.3 miles; and Stone Canyon 0.28 miles. This Alternative proposes 0.10 miles of unauthorized routes in the Wahoo Mountain IRA to maintain for periodic administrative use or by written authorization only.

This alternative proposes designation of 56 miles/4,420 acres of the same 300 ft. corridor on both sides of the road for Motorized Dispersed Camping and Motorized Big Game Retrieval. MBGR is for deer and elk only. Since all successful hunters will not have hunted within an IRA and not all use motorized modes of transportation to retrieve their game, the maximum number of trips is estimated to be less than the forest total of 2,663 trips. No Motorized Areas are proposed in Alternative D, however the corridors for MDC were identified to the extent possible, to include campsite areas that are currently being accessed by motorized vehicles within IRAs.

Alternative E

Alternative E is the most restrictive of the Alternatives and does not propose any motorized trail routes, corridors for Motorized Dispersed Camping or Motorized Big Game Retrieval or Motorized Areas. Of the 2,290.3 miles of road proposed for designation, 156.4 miles are located within IRAs. Roads within IRAs total 166.9 miles when including county and state roads.

There are 0.28 miles of unauthorized routes to maintain for periodic administrative use or by written authorization only within the Stone Canyon IRA. This Alternative proposes the same

0.08 miles of ML-1 (closed) roads to maintain for periodic administrative use or by written authorization only within the Contiguous to Gila Wilderness & Primitive Area IRA as in Alternative D. This e proposed designation of 156.4 miles of NFS road routes, is the least within IRAs of all Action Alternatives. This is a decrease of 205.7 miles of motorized road and a decrease of 4.5 miles of motorized trail opportunities within IRAs.

Alternative F

Of the 3,329.2 miles of road proposed for designation, 226.4 miles are located within IRAs. Roads within IRAs total 236.9 miles when including county and state roads.

There are 20.9 miles of motorized trail opportunities proposed within IRAs. This is a decrease of 138 miles of motorized road and an increase of 16.4 miles of motorized trail opportunities within IRAs. This alternative proposes 0.28 miles of unauthorized routes to be designated open to motorized travel within the Stone Canyon IRA and 0.10 miles of unauthorized routes in the Wahoo Mountain IRA to maintain for periodic administrative use or by written authorization only.

This alternative proposes 1,421.6 miles/101,911 acres of motorized access for dispersed camping and 237.0 miles/ 222,354 acres ½ mile off both sides of roads for motorized access for big game retrieval for elk only. Since all successful hunters will not have hunted within an IRA and not all used motorized

modes of transportation to retrieve that game the maximum number of trips is estimated to be less than the forest total of 1,311. The same Motorized Areas proposed in Alternative C located on the Wilderness District are proposed for designation in this Alternative. See Alternative C above.

Alternative G

Of the 3,300.1 miles of road proposed for designation 223.3 miles are located within IRAs. Roads within IRAs total 233.8 miles when including county and state roads.

There are 22.3 miles of motorized trail opportunities proposed within IRAs. This is a decrease of 138.8 miles of motorized road and an increase of 17.8 miles of motorized trail opportunities within IRAs. This alternative proposes 0.68 miles of unauthorized routes to be maintained as open to motorized travel within the following IRAs: Lower San Francisco .30 miles; Stone Canyon .28 miles; and Wahoo Mountain .10 miles.

This Alternative proposes 63 miles/4,954 acres of Motorized Dispersed Camping and Motorized Big Game Retrieval for elk and deer within the same corridors 300- ft. off both sides of the road. Since all successful hunters will not have hunted within an IRA and not all use motorized modes of transportation to retrieve that game, the maximum number of trips is estimated to be less than the forest total of 2,663. The same Motorized Areas on the Wilderness District proposed in Alternative C and F are proposed for designation in this Alternative. See Alternative C above.

Environmental Consequences

Analysis Methods

In this analysis, potential impacts to roadless areas and their values are discussed for the purpose of compliance with the National Environmental Policy Act, which requires disclosure of expected impacts to forest resources. This analysis is not meant to have any bearing on the implementation of the Roadless Rule other than to understand the potential effects to roadless characteristic values from the proposed Action Alternatives. The analysis also includes the consideration of irreversible and irretrievable commitments of resources on Roadless Area characteristic effects for potential designation as wilderness under the 1964 Act.

Table IRA A1 located in Appendix A of this document displays the acreages of the 29 Inventoried Roadless Areas located on the Gila National Forest. This analysis used the Forest Geographic Information System coverage of Roadless Areas. Table IRA A1 shows the difference between IRA acreages calculated in NAD 83 UTM Zone 12 utilized in the GIS coverage and the official acreages calculated in Albers from 2001 Roadless Area Conservation rule, 36 CFR Part 294. All Tables may contain some rounding error.

Table 7 below contains an analysis of the effects of the No Action and Action Alternatives on Roadless Area Characteristics. Some of the road and trail miles proposed for designation are located along the IRAs boundaries. In some cases the IRA boundary is displayed crossing the road where it was likely intended to run along and not cross it. Routes along boundaries are denoted in Unauthorized Routes to Maintain as Roads in Table IRA A5 located in Appendix A of this report. Alternative C proposes to designate 35 miles of non-motorized trail system to maintain for motorized single track use within IRAs.

Inventoried Roadless Area Indicators

Inventoried Roadless Areas provide clean drinking water and function as biological strongholds for populations of threatened and endangered species. They provide large, relatively undisturbed landscapes that are important to biological diversity and the long-term survival of many at risk species. Inventoried Roadless Areas provide opportunities for dispersed outdoor recreation, opportunities that diminish as

open space and natural settings are developed elsewhere. They also serve as bulwarks against the spread of non-native invasive plant species and provide reference areas for study and research.

Inventoried Roadless Areas are managed for 9 Roadless Characteristics Resources or features that are often present in and characterize Inventoried Roadless Areas. These characteristics that follow are the indicators used in the Inventoried Roadless Area Analysis.

- Soil, water, and air resources
- Sources of public drinking water
- Diversity of plant and animal communities
- Habitat for TES and species dependent on large undisturbed areas of land
- Primitive and semi-primitive motorized and non-motorized classes of recreation,
- Reference landscape for research study or interpretation
- Natural appearing landscapes with high scenic quality
- Traditional cultural properties and sacred sites
- Other locally unique characteristics – Eligible Wild & Scenic Rivers outside of Wilderness

Effects Common to All Action Alternatives Regarding Inventoried Roadless Areas

- All Action Alternatives would prohibit cross-country travel in IRAs. Roads would be closed unless designated open. This could improve resource conditions of all 9 Roadless Characteristics and primitive classes of recreation opportunities within the IRAs on the Forest. See Table 2 through Table 6 below.
- Parking off roads would be allowed up to one vehicle length including a trailer in all Action Alternatives. This should reduce impacts to the Soil and Water Roadless Characteristics within IRAs that can be caused by parking further off roadways.
- All Action Alternatives decrease the miles of roads within IRAs ranging from an 18percent decrease in Alternative C to a 45 percent decrease in Alternative E. See Table 2 with percent decrease in road miles/Alternative. Proposing fewer roads than people are driving now within IRAs means there could be visitor dissatisfaction due to being restricted from places they have traditionally accessed on the forest within a particular IRA with a vehicle. The reduction in road mileage provides additional Primitive and Semi-Primitive Non-Motorized opportunities within IRAs on the Forest.
- All roads including unauthorized and decommissioned routes that are proposed to be maintained on the road and motorized trail system within IRAs already have a footprint on the ground and are currently being used by the public. There is not an expected change in use or change in resource condition of these existing routes as a result of implementation of the Action Alternatives. If these routes are not designated and are unavailable for use, traces of the route will likely remain for a long time, especially those routes on steep slopes where erosion often prevent plants from growing back. This would affect the roadless characteristic of Natural Appearing Landscape with High Scenic Quality. (See Watershed and Soils section of the FEIS.)
- All Action Alternatives keep Road 4260U open. This road provides access to the Rain Creek Trailhead located ½ mile within the Contiguous to the Gila IRA. Access to this trailhead will continue to provide a parking area for hikers and horseman traveling on Rain Creek Trail 189 accessing the West Fork of Mogollon Creek and Bud's Hole. This poses no change in access or the facilities located within the Contiguous to the Gila IRA.

- The following IRAs would continue to provide Primitive and Semi-Primitive Non-Motorized opportunities for visitors. Currently there are no designated Motorized Trails located within the following IRAs: Apache Mountain; Brushy Mountain; Brushy Springs; Canyon Creek; Contiguous to Blue Range Wilderness; Dry Creek; Elk Mountain; Hell Hole; Lower San Francisco; Poverty Creek; Stone Canyon; T Bar; Taylor Creek; The Hub; Wagon Tongue; and Wahoo Mountain. None of the Action Alternatives propose to designate any motorized trail mileage within these IRAs. See Appendix A Table IRA A9 of this document. All Action Alternatives propose to close 0.8 miles of open road that is coincident with the CDNST Trail within the Wahoo Mountain IRA. This would provide a Non-Motorized Trail opportunity on this segment of the CDNST meeting the purpose and need of the CDNST.

The following tables display the changes proposed to motorized access and recreation opportunities within all IRAs. The Tables in the Appendices break out this information by individual IRA for each parameter. Table IRA A2 - Motorized Road Route Designation by Definitions located in the Appendices depicts NFS roads open to all motor vehicles within IRAs. The mileages displayed in Appendix A Table IRA A3 - Miles of Road Opportunities by IRA figures differ from the Designation by Definition because the opportunities include state and county roads located within IRAs.

Most of the road mileages illustrated in Table 2 below are not contiguous. Most are slivers of road that travel along or between the IRAs boundaries. The 2.5 miles of state roads shown within IRAs include the following Highways: Hwy 15 accessing the Gila Cliff Dwellings National Monument; Hwy 35 in the Mimbres area, Hwy 12 in the Reserve area, Hwy 159 Bursam Road, Hwy 78 Mule Creek Road, Hwy 59 Beaverhead Road, and Hwy 174 that accesses the Catwalk outside of Glenwood. These road mileages are located along boundaries where it is apparent they were not intended to be included within the IRA boundary. Most of the 8 miles of county road depicted in the Tables provide access well within the IRAs boundary.

Table 2. Miles of route types within inventoried roadless areas

Route types	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Total Miles of Open Road*	372.7	307.3	208.8	167.0	237.0	233.9
Miles of Road for Periodic Administrative Use or By Written Authorization	0.0	27.1	46.1	47.5	45.6	42.5
Total Unauthorized Routes to maintain as road **	0.00	0.42	0.81	0.28	0.38	0.68
Total Re-Opened Routes ***	0.00	1.10	0.00	0.00	0.00	0.00

*Miles of Open Road includes public access roads including county and state highways

**Table IRA A5 in Appendix A depicts the IRA where the routes are located and identifies which routes run along an IRA boundary.

***Reopened Routes - Maintenance Level 1 (ML-1) Road or Decommissioned Road proposed to maintain in FS Road System.

Note: Table 1 and the following tables are included to illustrate the differences in the Roadless Characteristic of Recreation Opportunity Settings of Primitive, Semi-Primitive Non-Motorized and Semi-Primitive Motorized Classes of Dispersed Recreation within IRAs.

The following list depicts the resulting reduction of miles of public access per alternative located within IRAs:

- Alt C: Reduction of 65.4 miles (-18.0 percent)
- Alt D: Reduction of 163.9 miles (-44 percent)
- Alt E: Reduction of 205.7 miles (-45 percent)

- Alt F: Reduction of 135.7 miles (-37 percent)
- Alt G: Reduction of 138.8 miles. (-38 percent)

Table 3. Miles and acres of motorized dispersed camping and motorized big game retrieval within inventoried roadless areas

Type of Inventoried Roadless Area (IRA)	IRA (total acres)	Alt B (mi. and ac.)	Alt C (mi. and ac.)	Alt D (mi. and ac.)	Alt E (mi. and ac.)	Alt F (mi. and ac.)	Alt G (mi. and ac.)
Motorized Dispersed Camping	734,384	N/A mi. 718,219 ac.	85 mi. 6,615 ac.	56 mi. 4,420 ac.	0 mi. 0 ac.	67 mi. 5,303 ac.	63 mi. 4,954 ac.
Motorized Big Game Retrieval	734,384	N/A mi. 718,219 ac.	307.2 mi. 461,827 ac.	56 mi. 4,420 ac.	0 mi. 0 ac.	237.0 mi. 222,354 ac.	63 mi. 4,954 ac.

Note: Alt. B is no-action alternative, Alt. C – 1 mile each side from any designated road, Alt. D – 300 feet using same motorized dispersed camping corridor, Alt. E – No motorized dispersed camping or motorized big game retrieval, Alt. F – ½ mile each side from any designated road, and Alt. G – 300 feet using same motorized dispersed camping corridor

Table 4. Acres of proposed motorized areas within inventoried roadless area contiguous to Black and Aldo Leopold Wilderness, 112,027 acres

Motorized Area Name	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
WA2		0.40	0.00	0.00	0.40	0.40
WA25		0.21	0.00	0.00	0.21	0.21
WA26		0.17	0.00	0.00	0.17	0.17
WA27		0.19	0.00	0.00	0.19	0.19
Total	112,027	0.97	0.00	0.00	0.97	0.97

Table 5. Miles of trail route types within inventoried roadless areas

Trail Route Type	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Motorized Trail*	4.5	52.4	9.0	0.0	20.9	22.3
ML-1 Closed Roads						
Other Non-motorized Travel Routes	39.1	71.1	152.5	200.9	117.8	123.0
Non-Motorized Trail	309.5	275	309.5	309.5	309.5	309.5

*See Appendix A Table IRA A8, Table IRA A9, and Table IRA A10..

Table 6. Miles of unauthorized motorized route to be maintained as motorized trails in inventoried roadless areas**

Routes	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Total Unauthorized Routes to maintain as motorized trail	0.00	1.62	0.35	0.00	0.87	0.87
Total Re-Opened Routes ***	0.00	2.11	0.54	0.00	2.11	2.11
Total Non-motorized Trail to single track	0.00	34.70	0.00	0.00	0.00	0.00
Total Unauthorized Trail to Single Track	0.00	0.90	0.00	0.00	0.00	0.00

**See Appendix A Table IRA A12.

***Reopened Routes - Maintenance Level 1 (ML-1) Road or Decommissioned Road proposed to maintain in FS Road System.

Table 7 that follows describes the effects on each Roadless Characteristic for each Alternative utilizing the above data tables and the data tables located in the Appendices of this document. This effects analysis includes all 29 Inventoried Roadless Areas on the Gila National Forest. Under other Pertinent information at the bottom of the table, route specifics are displayed for the Hell Hole and Lower San Francisco IRAs. This is included for comparison purposes with the Effects to the Roadless Characteristics within the WSA section that provides a narrower focus on the Hell Hole and Lower San Francisco River corridors. The other pertinent information discussion also highlights access roads within the IRAs that provide access to the WSAs.

Table 7. Effects analysis – roadless characteristics for all inventoried roadless areas

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
<p>Soil, water, aquatics and air resources</p> <p>All Action Alternatives provide for a net decrease in adverse cumulative impacts and improve these resources within IRAs by limiting areas available for cross-country travel and designation of motorized use on roads and trails.</p> <p>All Alternatives (including No Action) comply with the applicable fisheries, water, and soil-related standards and guidelines from the Forest Plan as well as other pertinent laws, regulations, and directives (i.e. Clean Water Act, Endangered Species Act).</p>	<p>Stable in most IRAs with localized effects degrading soil resources due to existing condition of motorized cross country travel being permitted to continue with the associated expansion of unauthorized routes.</p> <p>Greatest risk of direct and indirect impacts to water quality, riparian plants, habitat disturbance, mobilization and downstream transport of stream bottom sediments from motorized traffic.</p>	<p>Alternative C proposes the most miles of motorized trail routes, miles, and acres of MDC and MBGR and acres of Motorized Areas. Alternative C poses the least reduction in risk and potential to negatively impact watershed, aquatic, and soil resources within IRAs.</p> <p>Only a slight decrease in risk of direct and indirect impacts to water quality, riparian plants, habitat disturbance, mobilization and downstream transport of stream bottom sediments from motorized traffic, due to same number of stream crossings and 0.10 less miles of route along streams.</p>	<p>Alternative D proposes the second most reduction of adverse cumulative impacts by eliminating cross country travel outside of the 300 ft. designated corridors and reducing the second most motorized routes within IRAs.</p> <p>Eliminates direct and greatly reduces indirect impacts to water quality, riparian plants, habitat disturbance, mobilization and downstream transport of stream bottom sediments from motorized traffic, due to elimination of stream crossings reduction of route along streams.</p>	<p>Alternative E proposes no miles of motorized trail routes, or miles/acres of corridors for MDC or MBGR and acres of Motorized Areas. This Alternative provides the most reduction in relative risk and potential impacts to riparian and wetlands/wet meadows, water quality, and aquatic resources within IRAs.</p> <p>Eliminates direct and greatly reduces indirect impacts to water quality, riparian plants, habitat disturbance, mobilization and downstream transport of stream bottom sediments from motorized traffic, due to elimination of stream crossings and route along streams.</p>	<p>Alternatives F and G reduces similar miles of routes within IRAs but less than D and E. More miles of MBGR are proposed with wider corridors than Alternative G. This Alternative reduces cumulative impacts for soil, air, water, and aquatic resources within IRAs but less than D, E, and G.</p> <p>Only slight decrease in risk of direct and indirect impacts to water quality, riparian plants, habitat disturbance, mobilization and downstream transport of stream bottom sediments from motorized traffic, due to greatest number of stream crossings and route miles along streams.</p>	<p>Alternatives F and G reduces similar miles of routes within IRAs but less than D and E. This Alternative is similar to D in restricting cross-country travel outside of the 300 ft. MDC/MBGR corridors. This Alternative reduces cumulative impacts for soil, air, water, and aquatic resources within IRAs but less than D and E.</p> <p>Eliminates direct and greatly reduces indirect impacts to water quality, riparian plants, habitat disturbance, mobilization and downstream transport of stream bottom sediments from motorized traffic, due to elimination of stream crossings reduction of route along streams.</p>

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
<p>All Alternatives would continue to meet state air quality standards within IRAs with improvement potentially occurring in Alternatives D, E, F, and G.</p> <p>Under All Action Alternatives, set distances for MDC and MBGR reduce potential impacts to the watershed resource within IRAs.</p>						
Sources of public drinking water	No Change to the Headwaters of the San Vincente Draw located within the Meadow Creek IRA. Stable Conditions. Off road travel is currently restricted within this watershed.	No Change. There is no effect to this roadless characteristic because off road travel is currently restricted within this watershed.	No Change. There is no effect to this roadless characteristic because off road travel is currently restricted within this watershed.	No Change. There is no effect to this roadless characteristic because off road travel is currently restricted within this watershed.	No Change. There is no effect to this roadless characteristic because off road travel is currently restricted within this watershed.	No Change There is no effect to this roadless characteristic because off road travel is currently restricted within this watershed.
Diversity of plant and animal communities	Overall Habitat Conditions for Sensitive plant species dependent on large undisturbed areas of land are stable. Due to existing condition of cross country motorized travel being permitted with	Alternative C proposes the most miles of motorized trail routes, miles, and acres of MDC and MBGR posing the most risk for the spread of invasive species and disturbance to Sensitive plants	Alternative D proposes the second most reduction of motorized routes and reduces cross country travel to corridors for MDC and MBGR with it posing second least risk of spread	Alternative E proposes no miles of motorized trail routes, or miles/acres of MDC and MBGR or acres of Motorized Areas within IRAs posing the least risk for the spread of invasive species	Motorized areas proposed in Alternative F pose a risk for the spread of invasive species; however these areas currently receive motorized travel. A wider corridor for	There are no known invasive species sites located within the Motorized areas proposed in Alternative G. These areas pose a risk for the spread of invasive species; however these areas currently

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
<p>Habitats for Sensitive plant species would benefit from less ground disturbance from specifically designating motorized road, trail routes, and areas.</p> <p>Designation of routes within All Action Alternatives serves to minimize cross-country disturbance to Sensitive plants and potential for the spread of invasive species.</p> <p>See the Wildlife section of this document for effect to specific wildlife species.</p> <p>Unauthorized routes proposed to maintain as motorized routes currently receive motorized use and should not pose additional risk of the spread</p>	<p>the associated expansion of unauthorized routes, localized areas may be degrading.</p> <p>Where roads and trails exist within IRAs, they provide the greatest risk for introduction of new non-native species. Unauthorized routes created due to unlimited cross-country travel also pose that same risk.</p> <p>This Alternative continues to allow cross- county travel which can also lead to additional route creation; therefore, this Alternative has the greatest potential to cause harvest and disturbance effects to the highest percentage of wildlife focal groups. It also has the highest potential to cause direct effects to Sensitive Plant habitat.</p>	<p>within IRAs.</p> <p>Motorized areas proposed in Alternative C pose a risk for the spread of invasive species; however these areas currently receive motorized travel within IRAs.</p> <p>This Alternative allows cross-country travel for big game retrieval up to 1 mile from motorized routes and also increases the miles of motorized routes above the existing condition in some focal species analysis areas. Of the five Action Alternatives this is the most impactful for wildlife. For some focal groups it could be argued that it may be worse than the existing condition. Other than the existing condition this Alternative has the greatest potential to affect</p>	<p>of invasive species and disturbance to Sensitive plant species.</p> <p>This Alternative substantially reduces the amount of cross-country travel allowed and typically reduces the number of motorized routes in focal group analysis areas by a greater percentage than in any other Action Alternative except Alternative E. Except for Alternative E, this Alternative causes the least harvest and disturbance effects to most focal groups within IRAs. There still remains a fairly high potential to cause harvest effects to the remaining Chiricahua leopard frog populations within IRAs on the forest, particularly considering potential cumulative effects. Provides for the</p>	<p>and disturbance to Sensitive plant species.</p> <p>This Alternative does not allow any off road use, and reduces the number of motorized routes by the largest percentage; therefore, this Alternative has the least potential to cause harvest and disturbance effects within IRAs. This alternative is substantially better for most wildlife focal groups than any of the other alternatives, particularly for federally listed terrestrial wildlife species. Provides for the greatest potential to support more of a diverse animal community than Alternatives B, C, D, F, and G.</p>	<p>MBGR with more miles is proposed in this Alternative compared to G posing a greater risk for the spread of invasive species within IRAs and disturbance to TES plant species.</p> <p>This Alternative allows cross-country travel for elk game retrieval up to 1/2 mile from motorized routes. On average this Alternative reduces the number of open motorized routes greater than Alternative C, but less than E, D, and G in this respective order. Providing for a greater potential to support more of a diverse animal community than Alternatives B and C.</p>	<p>receive motorized travel and there is currently no source of invasive plant species to spread. There is the potential for invasive plant species to be brought in on vehicle tires or undercarriages.</p> <p>This Alternative substantially reduces the amount of cross- country travel allowed and typically reduces the number of motorized routes in focal group analysis areas within IRAs. On average this Alternative reduces the number of open motorized routes greater than Alternative C, and F, but less than E, and D in this respective order. Providing for a greater potential to support more of a diverse animal community than Alternatives B, C, and F.</p>

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
of invasive species within IRAs.		wildlife species diversity.	next to the greatest potential to support a more diverse animal community, more so than Alternatives B, C, D, F, and G.			
<p>Habitat for TES and species dependent on large undisturbed areas of land</p> <p>TES and other species that depend upon large undisturbed areas of land (habitat) would benefit from specifically designating motorized road and trail routes. Designation serves to minimize motorized cross-country disturbance to species such as Mexican spotted owl, Mexican wolf, Southwestern willow flycatcher, Chiricahua leopard frog, raptors, forest</p>	Overall Habitat Conditions for TES and species dependent on large undisturbed areas of land are stable, but in some cases declining for species like the Chiricahua leopard frog. Due to the existing condition of cross-country motorized travel being permitted to continue with the associated expansion of unauthorized routes, localized areas are degrading.	Alternative C provides the most motorized trail miles, and corridors for MDC and MBGR within IRAs resulting in the least amount of undisturbed wildlife habitat. In some areas this Alternative increases disturbance effects to wildlife by maintaining the use of unauthorized routes.	Alternative D proposes an increase in motorized trail miles compared to Alternative B, but less than Alternatives C, F, and G within IRAs. It proposes the second least miles/ acres of MDC and MBGR and no Motorized Areas. With these reductions in motorized use, second to Alternative E, Alternative D would reduce disturbance to wildlife and improve wildlife security within IRAs.	Alternative E provides the least motorized trail miles, no corridors for MBGR and MDC, and no Motorized Areas within IRAs providing the most improved habitat conditions for wildlife. Alternative E would greatly reduce the amount of motorized use within the IRAs, and would reduce disturbance to wildlife in these areas.	Alternatives F and G reduces similar miles of routes within IRAs but less than D and E. More miles of MBGR are proposed with wider corridors than Alternative G making this Alternative have more of an effect on wildlife disturbance than Alternatives D, E and G.	Alternatives F and G reduces similar miles of routes within IRAs but less than D and E. This Alternative is similar to D in restricting cross-country travel outside of the 300 ft. MDC/MBGR corridors. This Alternative provides more undisturbed wildlife habitat within IRAs than F and C.

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
and grassland birds, large ungulates, and wide ranging carnivores.						
<p>Primitive, Semi-Primitive Non-Motorized and Semi-Primitive Motorized classes of dispersed recreation</p> <p>All Action Alternatives would prohibit cross-country travel and would decrease the miles of roads within IRAs. See Cumulative Effects.</p> <p>Miles of unauthorized routes and ML-1(closed) roads to maintain as FS system Road or motorized trail are located in Table 2 and Table 6 above.</p>	<p>See Table 2 through Table 6 above that display the current mix of Primitive, Semi-Primitive Non-Motorized and Semi-Primitive Motorized classes of dispersed recreation opportunities within IRAs.</p> <p>Motorized cross-country travel is currently allowed within all IRAs with the potential for the addition of unauthorized routes.</p> <p>Currently Semi-Primitive Motorized opportunities are provided on 2.9 miles of the CDNST within IRAs. The CNDST is located on roads open to motorized use within the Gila Box, Wahoo Mountain, and Wagon Tongue. See Table IRA A-13 in Appendix A of this document.</p>	<p>Alternative C offers the most miles of designated road, trails open for ATV use, designation of motorcycle trails, miles of unauthorized and reopened routes to maintain as road and motorized trail, miles/ acres of MDC and MBGR, and proposes 4 Motorized Areas. Visitors who currently access dispersed campsites not located within corridors or areas for MDC within IRAs could be dissatisfied. Visitors would be able to continue to travel on Unauthorized roads and reopened routes proposed to maintain as NFS system roads located within the Wahoo Mountain, Stone Canyon, and</p>	<p>Alternative D provides less Primitive and Semi-Primitive Non-Motorized trail opportunities than E. It provides more Semi-Primitive Motorized opportunities with opportunities for MBGR and MDC than E. No Motorized Areas are proposed. There is the potential for user dissatisfaction by users who currently travel on roads proposed for closure and practice MDC and MBGR outside of corridors proposed for these activities. After Alternative E, Alternative D provides more Primitive and Semi-Primitive Non-Motorized opportunities for visitors seeking solitude that the</p>	<p>Alternative E would provide the most Primitive and Semi-Primitive Non-Motorized trail and non-motorized dispersed camping opportunities for those visitors seeking solitude. There would be no opportunities for MDC, MBGR, or Motorized Areas. This alternative impacts current motorized users who travel off of existing motorized routes to travel, sight see, picnic, dispersed camp and retrieve game. Parking off roads would be allowed up to one vehicle length including a trailer. Visitors could then hike their gear to a campsite along the roadside. There is the potential for the most dissatisfaction</p>	<p>Alternatives F and G would provide similar Primitive and Semi-Primitive Non-Motorized trail, and MDC opportunities, however both provide more motorized opportunities than D and E. Alternative F proposes the same 4 Motorized Areas proposed in Alternative C. Visitors who currently access dispersed campsites not located within corridors or areas for MDC within IRAs could be dissatisfied. The difference from Alternative G is more opportunities within IRAs for MBGR. This Alternative provides more opportunity for hunters who choose to retrieve game using motorized modes of</p>	<p>Alternative G offers less Motorized trail opportunities than Alternative C and F. Alternative G proposes the same 4 Motorized Areas proposed in Alternative C and F. Visitors who currently access dispersed campsites not located within corridors or areas for MDC within IRAs could be dissatisfied. Opportunities for MDC and MBGR are restricted to the same 300 ft. corridors (less than Alternative F). Hunting related ATV activities within IRAs associated with MDC and MBGR would be the same as those opportunities provided for other ATV recreationists. With less acres of MBGR proposed</p>

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
		<p>Poverty Creek IRAs.</p> <p>Unauthorized routes proposed to maintain as single track motorcycle trail would provide opportunities in the Contiguous to Gila Wilderness & Primitive Areas, Contiguous to Black & Aldo Leopold Wilderness, Meadow Creek, and Sawyers Peak IRAs.</p> <p>Unauthorized routes to maintain as ATV trails would provide opportunities within the Contiguous to Gila Wilderness & Primitive Areas, Contiguous to Black & Aldo Leopold Wilderness, Devils Creek, Gila Box, and Mother Hubbard IRAs.</p> <p>In contrast, Alternative C offers the least Primitive and Semi-Primitive Non-Motorized opportunities in IRAs. Motorized users would benefit</p>	<p>other Action Alternatives.</p> <p>Visitors will be able to continue to travel on Unauthorized roads and reopened routes proposed to maintain as NFS system roads located within the Contiguous to the Black & Aldo Leopold Wilderness, and Lower San Francisco IRAs. Stone Canyon, and Wahoo Mountain IRAs are proposed for periodic administrative use or by written authorization only. Unauthorized and reopened routes proposed to maintain as NFS system trail would provide opportunities in the Contiguous to Gila Wilderness & Primitive Areas and Contiguous to Black & Aldo Leopold Wilderness Area IRAs.</p> <p>In Alternatives D, E</p>	<p>by motorized users who currently travel on roads proposed for closure and practice MDC and MBGR within IRAs. The only unauthorized routes and ML- 1 closed roads are proposed to maintain for periodic administrative use or by written authorization only within the Stone Canyon IRA. Visitors that currently utilize unauthorized routes and ML-1 closed roads could experience dissatisfaction at the loss of access on these routes within IRAs.</p> <p>This Alternative favors non-motorized users and provides the most opportunities for non-motorized uses in IRAs and along the CDNST. See effects in Alternative D regarding the 2.9 miles of road coincident with the</p>	<p>transportation. There is the potential for dissatisfaction by motorized users who currently travel on roads proposed for closure and practice MDC and MBGR outside of proposed corridors within IRAs. Unauthorized and reopened routes proposed to maintain as NFS system motorized trail would provide opportunities in the Contiguous to Gila Wilderness & Primitive Areas, Contiguous to Black & Aldo Leopold Wilderness Area, Devil's Creek, Gila Box, and Mother Hubbard IRAs.</p> <p>See effects in Alternative D regarding the 2.9 miles of road coincident with the CDNST proposed for closure.</p>	<p>than Alternative F, this could provide more opportunities for those seeking solitude in the fall. Motorized users would be able to continue to travel on unauthorized roads proposed to maintain as NFS system roads located within the Lower San Francisco IRA. Unauthorized and reopened routes proposed to maintain as NFS system motorized trail would provide opportunities in the same IRAs listed for Alternative F. See effects in Alternative D regarding the 2.9 miles of road coincident with the CDNST proposed for closure.</p>

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
		<p>from this Alternative with the most access provided, while Non-Motorized users may shift their use to other areas of the forest or to Wilderness Areas.</p> <p>This Alternative would provide the most Semi-Primitive Motorized opportunities in IRAs and on the CDNST in IRAs. CDNST traveling on roads within an IRA would be reduced to 1.1 miles. However, this Alternative proposes the most miles/acres of MDC and MBGR where the CDNST would travel through. This Alternative poses the most motorized interactions for CDNST travelers within IRAs making it the least compatible with the purpose and intent of the CDNST.</p>	<p>F, and G, the 2.9 miles of road coincident with the CDNST located within IRAs are proposed for closure meeting the intent of Semi-Primitive Non-Motorized Use on the trail.</p>	<p>CDNST proposed for closure.</p>		

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
<p>Natural appearing landscapes with high scenic quality</p> <p>Visual Quality could be improved in all Action Alternatives due to the prohibition on cross-country travel. The elimination of cross-country travel and limiting motorized use to designated routes would reduce the possibility of the creation of new unauthorized routes.</p>	<p>Conditions are stable to decreasing where evidence of cross-country travel may impact the visual appeal with high scenic quality over time.</p> <p>With the continuation of cross-country travel there is a potential for the addition of unauthorized routes to continue within IRAs which has the potential to adversely affect visual resources. The effects include erosion, bare soil, and trampling of vegetation.</p>	<p>Alternative C proposes the most corridors for MDC and MBGR and proposes Motorized Areas. Alternative C poses the most potential risk to visual resources within IRAs of the Action Alternatives. The overall effects of this Alternative are less than Alternative B No Action due to the prohibition on cross-country travel.</p>	<p>Alternatives D, E, F, and G propose seasonal restrictions on the Eagle Peak Road located within the Eagle Peak IRA. The implementation of seasonal restrictions on this route could improve Visual Quality because the closures would help to protect routes from erosion and rutting during the wet season.</p>	<p>Alternative E proposes no miles of motorized trail routes, or miles/acres of MDC and MBGR or acres of Motorized Areas. This Alternative poses the least potential risk to visual resources within IRAs. The effects of erosion, bare soil, and trampling would be kept to a minimum.</p> <p>The seasonal restrictions proposed in Alternative D are a part of this Alternative. See Alternative D.</p>	<p>Alternative F proposes more miles of MBGR with wider corridors than Alternative G. This Alternative reduces potential risk to visual resources, but less than D, E, and G.</p> <p>The seasonal restrictions proposed in Alternative D are a part of this Alternative. See Alternative D.</p>	<p>This Alternative is similar to D in restricting cross-country travel outside of the 300 ft. MDC/MBGR corridors. This Alternative reduces cumulative impacts for visual resources within IRAs but less than D and E.</p> <p>The seasonal restrictions proposed in Alternative D are a part of this Alternative. See Alternative D.</p>
<p>Reference landscapes for research study or interpretation</p> <p>The implementation of the prohibition on cross country travel would apply to both RNA's within IRAs and would reduce the possibility of the creation of new</p>	<p>All of the designated Gila River RNA is located within the Gila Box IRA, is currently closed to cross-country travel, and has no roads located within the IRA. A portion (34%) of the proposed Turkey Creek RNA is located within the Contiguous to Gila Wilderness and Primitive Area IRA and that portion</p>	<p>No change – No Roads are located within RNAs within IRAs and per Forest Plan direction motorized cross-country travel is prohibited. No additional roads are proposed.</p>	<p>No change – No Roads are located within RNAs within IRAs and per Forest Plan direction motorized cross-country travel is prohibited. No additional roads are proposed.</p>	<p>No change – No Roads are located within RNAs within IRAs and per Forest Plan direction motorized cross-country travel is prohibited. No additional roads are proposed.</p>	<p>No change – No Roads are located within RNAs within IRAs and per Forest Plan direction motorized cross-country travel is prohibited. No additional roads are proposed.</p>	<p>No change – No Roads are located within RNAs within IRAs and per Forest Plan direction motorized cross-country travel is prohibited. No additional roads are proposed.</p>

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
unauthorized routes.	of the RNA contains no roads. The effects of the No Action Alternative are the same as the Action Alternatives.					
<p>Traditional cultural properties and sacred sites</p> <p>While no potential TCP's or sacred sites were identified as being affected by the Travel Management Plan through consultation, there is a chance that not all sacred sites or TCP's are known to the Gila NF.</p> <p>Effects to potential Traditional Cultural Properties and sacred sites in the No Action and all Action Alternatives may include, but are not limited to, routes bisecting the property and the introduction of noise to</p>	<p>Alternative B provides the maximum potential of motorized access to forest service lands through motorized cross-country travel. Therefore, Alternative B has the highest relative risk of effects to any potential TCPs or sacred sites of all Alternatives.</p> <p>In Alternative B, any motorized use of unauthorized, ML-1 or any other route occurs because of motorized cross-country travel.</p>	<p>Alternative C provides the most unauthorized routes, non-motorized trails, and ML-1 roads that will be maintained as either part of the FS Motorized Trail or Road System, motorized areas, and corridors for MDC and MBGR within IRAs. This Alternative also proposes the same number of motorized areas as Alternatives F and G.</p> <p>Outside of Alternative B, Alternative C poses the highest relative risk of effects to potential TCPs and Sacred Sites. See effects described for all Action Alternatives.</p>	<p>Alternative D proposes less miles/acres for unauthorized routes, and ML-1 roads that will be maintained as either part of the FS Motorized Trail or Road System than Alternative C, F, and G. It also proposes the closure of more routes than Alternatives C, F, and G.</p> <p>With the prohibition of motorized cross-country and the proposed closure of routes, Alternative D provides an overall decrease of motorized access or use when compared to Alternative B.</p> <p>Alternative D proposes the second least miles/acres of MDC and MBGR and no</p>	<p>Alternative E provides the least miles/acres for unauthorized routes, and ML-1 roads that will be maintained as either part of the FS Motorized Trail or Road System and no corridors for MDC and MBGR or Motorized Areas within IRAs.</p> <p>This Alternative would provide the most beneficial effects to TCPs and sacred sites.</p> <p>Changes presented in Alternative E result in the least potential for direct and indirect effects to potential sacred sites or TCPs of all alternatives. .</p>	<p>Alternative F proposes less miles/acres for unauthorized routes, and ML-1 roads that will be maintained as either part of the FS Motorized Trail or Road System than Alternative C; comparable to Alternative G; and more than Alternatives D and E. It also proposes more route closures than Alternative C, but less than E, D, and G.</p> <p>With the prohibition of motorized cross-country travel and the proposed closure of routes, Alternative F provides an overall decrease of motorized access or use when compared to Alternative B.</p> <p>Alternative F</p>	<p>Alternative G proposes less miles/acres for unauthorized routes, and ML-1 roads that will be maintained as either part of the FS Motorized Trail or Road System than C; comparable to Alternative F; and more than Alternatives D and E.</p> <p>With the prohibition of motorized cross-country travel and the proposed closure of routes, Alternative G provides an overall decrease of motorized access or use when compared to Alternative B.</p> <p>Alternative G proposes less MDC an MBGR acreage than Alternatives B, C, and F; comparable to Alternative D; and more than Alternative E.</p>

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
<p>traditional gathering areas or during other traditional activities.</p> <p>Beneficial effects from the closure of routes and the prohibition of motorized cross-country travel in the Action Alternatives to potential sacred sites and TCPs may include, but are not limited to, a reduction in noise, route-property intersections, and interruption of traditional activities. These beneficial effects will increase as the number of acres proposed for MDC corridors, MBGR, motorized areas, and miles of routes decrease.</p>			<p>Motorized Areas.</p> <p>This Alternative provides the second most beneficial effects to TCPs and sacred sites.</p> <p>Changes presented in Alternative D result in the second least potential risk for direct and indirect effects to potential sacred sites and TCPs within IRAs.</p>		<p>proposes less acreage for MDC and MBGR than Alternatives B and C and more than Alternatives D, E, and G.</p> <p>Alternative F proposes the same acreage of motorized areas as do Alternatives C and G.</p> <p>Alternative F would provide less beneficial effects to TCPs and sacred sites than Alternatives D, E, and G, but more than Alternative B and C.</p> <p>Changes presented in Alternative F result in less relative risk of direct and indirect effects to potential sacred sites or TCPs when compared to Alternatives B and C, but a higher relative for risk when compared to Alternatives D, E, and G.</p>	<p>Alternative G proposes the same acreage of motorized areas as do Alternatives C and F.</p> <p>Alternative G would provide less beneficial effects to TCPs and sacred sites than Alternatives D, and E, but more than Alternative B, C, and F.</p> <p>Changes presented in Alternative G result in less relative risk for direct and indirect effects to potential sacred sites and TCPs when compared to Alternatives B, C, and F, but poses a higher relative risk when compared to Alternatives D and E.</p>
Other locally unique characteristics:	A segment of Whitewater Creek runs through the	Alternative C proposes the same miles of motorized	Alternative D would limit cross-country travel to the same	Alternative E proposes no cross country travel, and	Alternative F would limit cross-country travel to the 0.83	Alternative G would limit cross-country travel to the 0.83

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
<p><u>1. Eligible Wild & Scenic Rivers Outside Wilderness</u></p> <p>The prohibition for cross-country travel will be in place for all eligible W&S Rivers outside of Wilderness. There is a potential for visitor dissatisfaction by those who currently travel cross-country within these eligible W&S River corridors within IRAs.</p>	<p>Devils Creek IRA, a segment of Diamond Creek runs through the Taylor Creek IRA and a segment of Las Animas Creek runs through the Contiguous to Black & Aldo Leopold Wilderness IRA. Currently, with no prohibition on cross-country travel, opportunities for MDC and MBGR are available within these eligible Wild & Scenic River corridors located within IRAs.</p>	<p>routes and motorized creek crossings As Alternatives B, F, and G. Cross-country travel would be limited to the 0.99 miles/89 acres of corridors for MDC and 0.99 miles 582 acres MBGR. This provides the most opportunities for these activities; however, hunters and dispersed campers may experience dissatisfaction at the entire eligible W&S River corridor segments within IRAs not being available for MDC and MBGR. Non-motorized users would appreciate the increased opportunity for solitude and unconfined primitive forms of recreation activities.</p>	<p>corridors, 0.99 miles/89 acres for MDC and MBGR.</p> <p>Hunters and dispersed campers may experience dissatisfaction at the entire W&S River corridor segments within IRAs not being available for MDC and MBGR.</p> <p>Non-motorized users would appreciate the increased opportunity for solitude and unconfined primitive forms of recreation activities. Hunting related ATV activities within IRAs associated with MDC and MBGR would be the same as those opportunities provided for other ATV recreationists within W&S River Corridors within IRAs.</p> <p>0. 5 miles of ATV</p>	<p>no MDC, or MBGR, or Areas are proposed in this Alternative.</p> <p>Hunters and dispersed campers may experience dissatisfaction at no opportunities for MDC or MBGR within W&S River corridor segments within IRAs. This Alternative favors non-motorized recreation opportunities within the eligible W&S Rivers within IRAs.</p> <p>As in Alternative D, 0.5 miles of ATV trail on Whitewater Creek is proposed for closure eliminating one motorized creek crossing. See effects listed for Alternative D.</p>	<p>miles/70 acres of corridors for MDC and 0.99 miles 446 acres MBGR.</p> <p>Hunters and dispersed campers may experience dissatisfaction at the reduced opportunities for MDC and MBGR within eligible W&S River corridor segments within IRAs.</p> <p>Non-motorized users would appreciate the increased opportunity for solitude and unconfined primitive forms of recreation activities.</p>	<p>miles/70 acres of corridors for MDC and MBGR.</p> <p>Hunters and dispersed campers may experience dissatisfaction at the reduced opportunities for MDC or MBGR within W&S River corridor segments within IRAs.</p> <p>Non-motorized users would appreciate the increased opportunity for solitude and unconfined primitive forms of recreation activities.</p> <p>Hunting related ATV activities within IRAs associated with MDC and MBGR would be the same as those opportunities provided for other ATV recreationists within W&S River Corridors within IRAs.</p>

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
			trail on Whitewater Creek is proposed for closure eliminating one motorized creek crossing. Non-motorized access will continue to provide the opportunity to experience the historic and Recreational Outstandingly Remarkable Values (ORV's) of this eligible W&S river segment located within an IRA. ATV riders who travel to Whitewater Creek on the ATV trail proposed for closure may experience dissatisfaction.			
<p>Other pertinent information: See Table IRA A13. in Appendix A of this document. 1. <u>Hell Hole IRA Route Specifics:</u> All Action Alternatives propose a reduction in miles of road access within the Hell</p>	Currently there are 10.9 miles of road open to the public within the Hell Hole IRA. Cross-country travel is currently allowed with the associated potential for the use of and addition of unauthorized routes.	Alternative C reduces the roads open to the public within the Hell Hole IRA to roughly half (5.8 miles) of what is currently available in Alternative B, the No Action Alternative. This Alternative provides the most motorized opportunities of the Action Alternatives.	Alternative D proposes to reduce road access to 2.4 miles within the Hell Hole IRA. This is slightly more road miles than proposed in Alternative F, however it provides less road miles than Alternatives C, E, and G.	Alternatives E proposes 4.1 miles of road opportunities in Alternative E.	Alternative F proposes the least road opportunities of the Action Alternatives 2.1 miles. This would provide the most opportunities for Primitive and Semi-Primitive Non-motorized activities.	Alternative G proposes 4.4 miles of road opportunities similar to Alternative E.

Roadless Characteristics	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
Hole IRA. Access from the from the Hell Hole IRA to the Hell Hole WSA is described below in the Proposed Changes to Motorized Access within WSAs section of this document.		The majority of the proposed road closures are short segments located at the end of roads. This is pertinent to all Action Alternatives.				
2. <u>Lower San Francisco IRA Route Specifics:</u> All Action Alternatives propose a reduction in miles of road within the Lower San Francisco IRA. Access from the from the Lower San Francisco IRA to the Lower San Francisco WSA is described below in the Proposed Changes to Motorized Access within WSAs section of this document.	Currently there are 17.6 miles of Road open the public within the Lower San Francisco IRA.	Alternative C provides slightly less road opportunities than the No Action alternative. 16.8 miles of roads open to the public. This provides the most opportunities for Semi-Primitive Motorized Activities.	Alternative D proposes 9.2 miles of road access within the Lower San Francisco IRA. This Alternative provides fewer motorized opportunities than Alternatives C, F and G.	Alternative E provides 5.1 miles of road opportunities, the least of the Action Alternatives.	Alternative F provides slightly less road opportunities than Alternative C at 16.5 miles.	Alternative G provides the same miles of road opportunities as Alternative D, 9.2 miles.

Cumulative Effects within Inventoried Roadless Areas

The cumulative effects analysis evaluates past, present, and reasonably foreseeable actions on roadless characteristics in IRAs. This analysis specifically considers those activities that have influenced motorized or non-motorized travel in the IRAs and their associated effects on roadless characteristics.

The cumulative effects analysis area for IRAs includes the 29 Roadless Areas within the boundary of the Gila National Forest. Consideration was given to cumulative effects beyond the IRA boundary to include Wilderness on the Gila National Forest, Blue Range Primitive Area and the Hell Hole and Lower San Francisco IRAs located on the Apache-Sitgreaves National Forests and WSAs located on BLM land administered by the Las Cruces Field Office. Time frame evaluated is the next twenty years. The Forest Activity Tracking System (FACTS) data base information for past actions is located in Appendix A, Table IRA A14. of this document.

Past Actions

Access to and within IRAs has been developed over time from past Native-American use, mining, military travel, timber harvest, road construction, and trail construction and reconstruction activities. There are 372.7 miles of roads located within the IRAs on the Forest. Many of the road mileages illustrated in Table 2 above are not contiguous. Road mileage occurs within all 29 IRAs with the most mileage occurring in Contiguous to the Gila Wilderness & Primitive Area and Devil Creek IRAs.

Since the implementation of the Forest Plan in 1986, existing roads and trails on the boundaries of and within IRAs have been routinely maintained. Trails within IRAs are maintained periodically to protect the trail, soil, and water resources. Specific trail improvement projects within IRAs include Camp Creek Trail on the Glenwood District within Aspen Mountain IRA, and reroutes on the CDNST in the Gila Box IRA and the Meadow Creek IRA.

There are two Inventoried Roadless Areas located on the Apache-Sitgreaves National Forest in Arizona adjacent to the Hell Hole and Lower San Francisco IRAs located on the Gila. The Hell Hole IRA located in Arizona is 15,547 acres in size and the Lower San Francisco is 59,124 acres in size.

Ongoing and Future Foreseeable Actions

Road and trail maintenance, as well as weed treatment, occurs along the transportation system located within the Gila National Forest IRAs (See Trail Maintenance discussion within Recreational Opportunities section). Grazing, Outfitter and Guide, and Communication Site and Power line permittees all utilize the road transportation system to access the IRAs on system roads for their operations. This road system is also used for firefighting operations. Projects to clear power lines located on the forest have occurred in the past and will continue to occur.

Treating noxious weeds would allow native vegetation to reestablish and greatly improve many roadless characteristics, such as the soil resource, diversity of plant and animal communities, and their associated habitat, and the naturalness associated with the area's landscape character and integrity. It also limits the expansion of weed infestations throughout non-infested areas within the IRAs.

Short term effects to recreational opportunities in Primitive and Semi-Primitive environments may occur if recreationists expecting solitude encounter weed control crews working in the IRAs. Apparent naturalness may also be affected in the short term where grubbing, pulling, and/or mechanical treatments are obvious.

Portions of active grazing allotments are located within all 29 IRAs located on the Gila National Forest. The presence of manure and stock trails would appear unnatural to many. Range improvements, like fences and watering facilities, are an obvious sign of man's work on an otherwise natural-appearing landscape.

A number of proposed projects could affect and improve IRA characteristics over the next 5 years. Weed treatment, vegetation projects, ongoing trail maintenance and reconstruction, and fire management activities all have the potential for cumulative effects on the areas' roadless characteristics

Future vegetation projects may include burning operations. Short term impacts to opportunities for quiet, backcountry recreation could be expected where recreationists encounter crews working with chainsaws, helicopters, etc. Burning of woody debris could result in short term exposure to weed infestations in the burned areas, impacting natural integrity. In the long term, burning projects benefit natural integrity by restoring a more natural fire regime in areas where fires have long been suppressed.

All Action Alternatives have the potential for the following cumulative effects within IRAs:

- In most cases the projects proposed within IRAs trend towards improving Roadless Area character.
- User dissatisfaction over the loss of the following motorized opportunities within IRAs.
 - ◆ Motorized cross-country travel.
 - ◆ Unlimited opportunities for Motorized Dispersed Camping
 - ◆ Unlimited opportunities for Motorized Big Game Retrieval.
 - ◆ Motorized access on specific roads within the IRAs proposed for closure.
 - ◆ Trails designated for non-motorized use within an IRA, where visitor expectations for that IRA has been for a Semi-Primitive Motorized Setting.
- User dissatisfaction from those non-motorized users who expressed the desire to see the IRAs managed to specifically favor Primitive and Semi-Primitive Non-Motorized Recreation Settings.
- User satisfaction dependent upon Alternative regarding the opportunities provided focusing on Primitive and Semi-Primitive Non-Motorized Recreation Settings within IRAs.

Irreversible or Irretrievable Commitments

All of the Action Alternatives may or may not result in the irreversible or irretrievable commitment of some of the forest's soil resources within IRAs. See Watershed and Soils Specialist Report (USDA Forest Service 2013d).

This decision can be revised, changed, or removed through the travel analysis process or by special order in the event of sudden, unforeseen, or emergency situations. The Motor Vehicle Use Map will be updated on an annual basis.

Wilderness Study Areas (WSAs)

Affected Environment

In 1980 when Public Law 96-550 (New Mexico Wilderness Act 1980) was passed it designated the Aldo Leopold and Blue Range Wilderness Areas in New Mexico. In addition this Law designated two areas, the Hell Hole and Lower San Francisco Wilderness Study Areas for review as having wilderness characteristics that make these areas worthy of consideration by Congress for wilderness designation. While Congress considers whether to designate a Wilderness Study Area (WSA) as permanent wilderness, the Gila National Forest manages the WSAs in a manner as to prevent impairment of the area's suitability for wilderness designation.

The Forest Plan (USDA Forest Service 1986) evaluated the Hell Hole and Lower San Francisco Wilderness Study Areas for wilderness suitability as directed by Congress and Public Law 96-550. The Gila National Forest Plan recommends that these areas not be designated as wilderness. Until such time that Congress acts on this recommendation, the forest plan calls for managing these lands to maintain existing wilderness character. No baseline monitoring data has been collected for the Wilderness Character within these WSAs. See Figure 2.

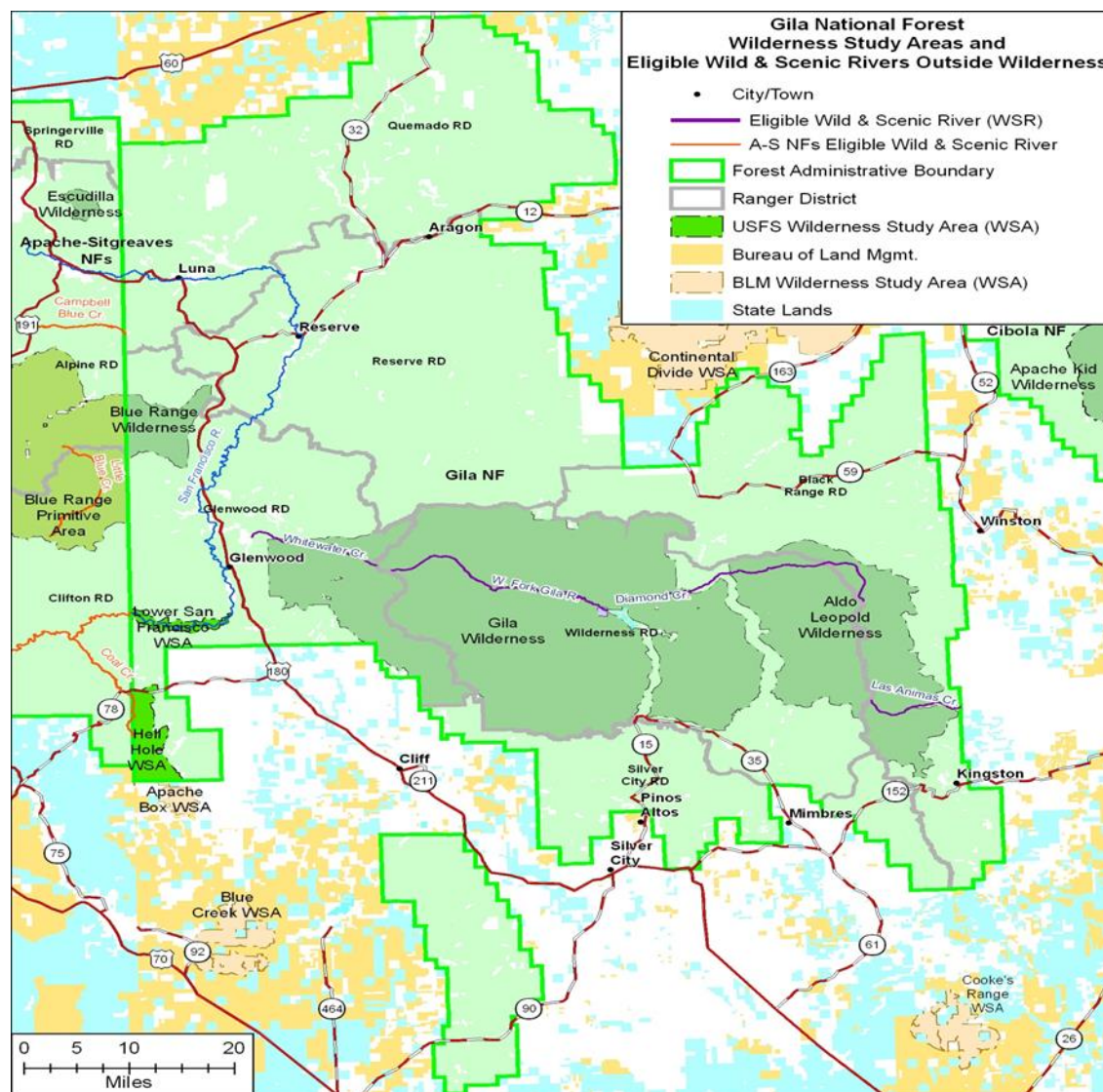


Figure 2. Wilderness study areas, Gila National Forest

Hell Hole Wilderness Study Area

The Hell Hole WSA, 18,860 acres in size is located south of Mule Creek New Mexico with the boundary running along the Arizona State line (acres listed in PL 96-550). The GIS layer displays Access from the north is by Highway 78 west of Mule Creek. A county road heading south from Mule Creek forms the eastern boundary of the WSA. The Apache Box WSA administered by the BLM is contiguous to the south of the Hell Hole WSA. The Hoverrocker WSA is a 22 acre area that remained after the adjacent Arizona portion of the WSA was released from wilderness review in 1990. This WSA is located west of the Hell Hole and Apache Box WSAs and is administered by the BLM.

The Hell Hole IRA located on the Gila National Forest encompasses the WSA; however the IRA is larger in size at 19,533 acres. The Hell Hole IRA located in Arizona on the Apache Sitgreaves NF lies to the west of the Hell Hole WSA and IRA located in New Mexico.

The landscape of the southern portion of the WSA is dominated by topographic features including deep, rugged canyons, rock peaks, and steep cliffs. The northern portion of the WSA is primarily rolling hills.

Vegetation varies greatly with elevation and aspect providing for variety and change. The presence of ponderosa pine in the WSA is somewhat unusual, as it is rather scarce in surrounding areas. The area lends itself to a variety of primitive recreation activities. The degree of difficulty and variety of conditions found in the WSA provide an adequate level of challenge regardless of user's skills.

Proposed Changes to Motorized Access within Hell Hole WSA by Alternatives

Each Action Alternative proposes a combination of changes to the motorized route system within WSAs. Data Tables utilized for this analysis are located in Appendix B of this document. The discussion below uses this data to contrast the difference in the combination of proposed routes and corridors for the Hell Hole WSAs by Alternative.

Alternative B

There are currently 10.7 miles of FS system road within the Hell Hole WSA. The County road shown in Table WSA B1 is located along the WSA boundary. See Table WSA B2 Hell Hole WSA miles of Motorized routes by Alternative located in Appendix B of this document. Due to firewood theft there is an extensive network of two track user created firewood access roads on the east side of the WSA. This system of routes has not been inventoried. Since there is no prohibition on cross country travel, MDC and MBGR are currently allowed. MBGR is currently utilized for the following species: elk; deer; bear; mountain lion; javalina; and pronghorn.

Alternative C

Alternative C proposes 5.7 miles of road, a reduction of 4.9 miles within the Hell Hole WSA. There are 3.0 miles proposed for periodic administrative use or by written authorization only (i.e., not open to the public for general use). MDC is proposed for 1.4 miles/114 acres. A one mile corridor on each side of the 5.7 miles/9,777 acres of designated routes for is proposed MBGR for the elk, deer, bear, mountain lion, javalina, and pronghorn.

Alternative D

Alternative D proposes 2.4 miles of road, a reduction of 8.3 miles within the Hell Hole WSA. There are 4.1 miles proposed for periodic administrative use or by written authorization only (i.e., not open to the public for general use). MDC is proposed for 0.23 miles/21.7 acres. This alternative proposes the same 300 ft. corridor on both sides of the road for MBGR for deer and elk only.

Alternative E

Alternative E proposes 4.0 miles of road, a reduction of 6.6 miles within the Hell Hole WSA. There are 2.5 miles proposed for periodic administrative use or by written authorization only (i.e., not open to the public for general use). No miles or acres of MDC or MBGR or Motorized Areas are proposed within this WSA.

Alternative F

Alternative F proposes 2.1 miles of road, a reduction of 8.6 miles within the Hell Hole WSA. There are 4.7 miles proposed for periodic administrative use or by written authorization only (i.e., not open to the public for general use). This alternative proposes 0.26 miles/29.0 acres of MDC and 2.1 miles/ 3,818 acres ½ mile off both sides of roads for MBGR for elk only.

Alternative G

Alternative G proposes 4.4 miles of road, a reduction of 6.3 miles within the Hell Hole WSA. There are 3.0 miles proposed for periodic administrative use or by written authorization only (i.e., not open to the

public for general use). This alternative proposes 0.23 miles/21.7 acres of MDC and MBGR. Big game retrieval for elk and deer is proposed within the same corridors as the 300- ft. off both sides of the road corridors for dispersed camping.

Lower San Francisco Wilderness Study Area

The Lower San Francisco WSA located on the Gila National Forest is located north of the Hell Hole WSA and is 8,800 acres in size (acres listed in PL 96-550). The Lower San Francisco IRA encompasses the WSA, however the IRA is larger in size at 26,461 acres. The Forests GIS layer shows there are 2,988 acres within the 7,132 acres (41 percent) of the Lower San Francisco IRA currently closed to motorized cross- country travel. The Lower San Francisco IRA located in Arizona on the Apache Sitgreaves NF lies to the west of the Lower San Francisco WSA and IRA located in New Mexico.

The Lower San Francisco River Wilderness Study Area is located west of Highway 180 and Glenwood, NM. Off of Highway 180, south of the community of Pleasanton, a dirt road heads southeast to provide access to the San Francisco Hot Springs Trailhead. The main recreation activity after the monsoons is accessing the San Francisco at Big Dry and driving the River to picnic, fish, and hunt. The recreation setting of this area is currently Roaded Natural. In May and June when water is high rafting and kayaking occurs. Rafters put in above the San Francisco Hot Springs south of Glenwood and take out at Martinez Ranch on the Apache Sitgreaves NF in Arizona. The box cliffs downriver from the San Francisco Hot Springs limit foot travel along the River.

Motorized use in the San Francisco River corridor has been and is very controversial. Opinions expressed by the public range from a total closure of the entire River corridor, to keeping the entire corridor open to motorized vehicle use. This wide range of opinion and the concerns raised were considered in developing the Travel Management Rule (TMR) proposed action and in the development of alternatives. During the comment period for the Draft EIS, specific concerns were raised about the effects of maintaining existing user created roads within the Lower San Francisco IRA and Wilderness Study Area. The unauthorized and decommissioned roads proposed to be maintained within the Lower San Francisco River WSA already have a footprint on the ground and are currently being used. The proposal to maintain these routes is not expected to result in a change in use. If these routes are not designated and are unavailable for use, traces of the route will likely remain for a long time, especially those routes on steep slopes where erosion often prevent plants from growing back.

Proposed Changes to Motorized Access within Lower San Francisco WSA by Alternative

Alternative B

There are two NFS roads (Road 68 and 4223 L) located within the Lower San Francisco WSA. NFS road 68 provides motorized access to where the San Francisco River and Big Dry Creek connect while NFS road 4223 L provides motorized access and use on the San Francisco River above Mule Creek. There is a restriction in effect from Mule Creek downstream to the Arizona-New Mexico border that prohibits motorized cross- country travel. The Lower San Francisco is surrounded by the Lower San Francisco IRA. Currently, only three points of motorized access exist to the border of the WSA starting from the IRA. In the areas where there is no prohibition on cross-country travel, motorized dispersed camping and motorized big game retrieval are currently allowed.

Alternative C

Alternative C proposes to allow motorized use and motorized dispersed camping from Highway 180 to Mule Creek. Alternative C proposes 8.0 miles of road a reduction of 0.21 miles of road within the river corridor. A motorized dispersed camping corridor 300 ft. on both sides of the road is proposed for all 8.0

miles/114 acres proposed as designated motorized road. A one mile corridor on each side of these 8.0 miles of designated road (4,062) acres is proposed for motorized big game retrieval for elk, deer, bear, mountain lion, javelina, and pronghorn.

Alternative D

Alternative D proposes to allow motorized use in Little and Big Dry Creeks. This Alternative proposes to close routes along the San Francisco River. Motorized Dispersed Camping would be allowed at the confluence of Big Dry and San Francisco River. No motorized access along the River would be allowed. Alternative D proposes 0.7 miles of road, a reduction of 7.5 miles of road. Motorized dispersed camping is proposed for 0.0 miles/0.2 acres. This acreage is from Road 4075D located on the southern rim of the San Francisco River Canyon near the Arizona state boundary outside of the WSA. This alternative proposes the same 300 ft. corridor on both sides of the road for Motorized Big Game Retrieval. Motorized Big Game retrieval is for deer and elk only. Existing unauthorized routes Glenwood Proposed Routes (GPR) 14, 15 and 16 totaling 0.3 miles are proposed to be maintained as open to all vehicle types. See Figure 3 - Lower San Francisco IRA and WSA Alternative D and G Proposals.

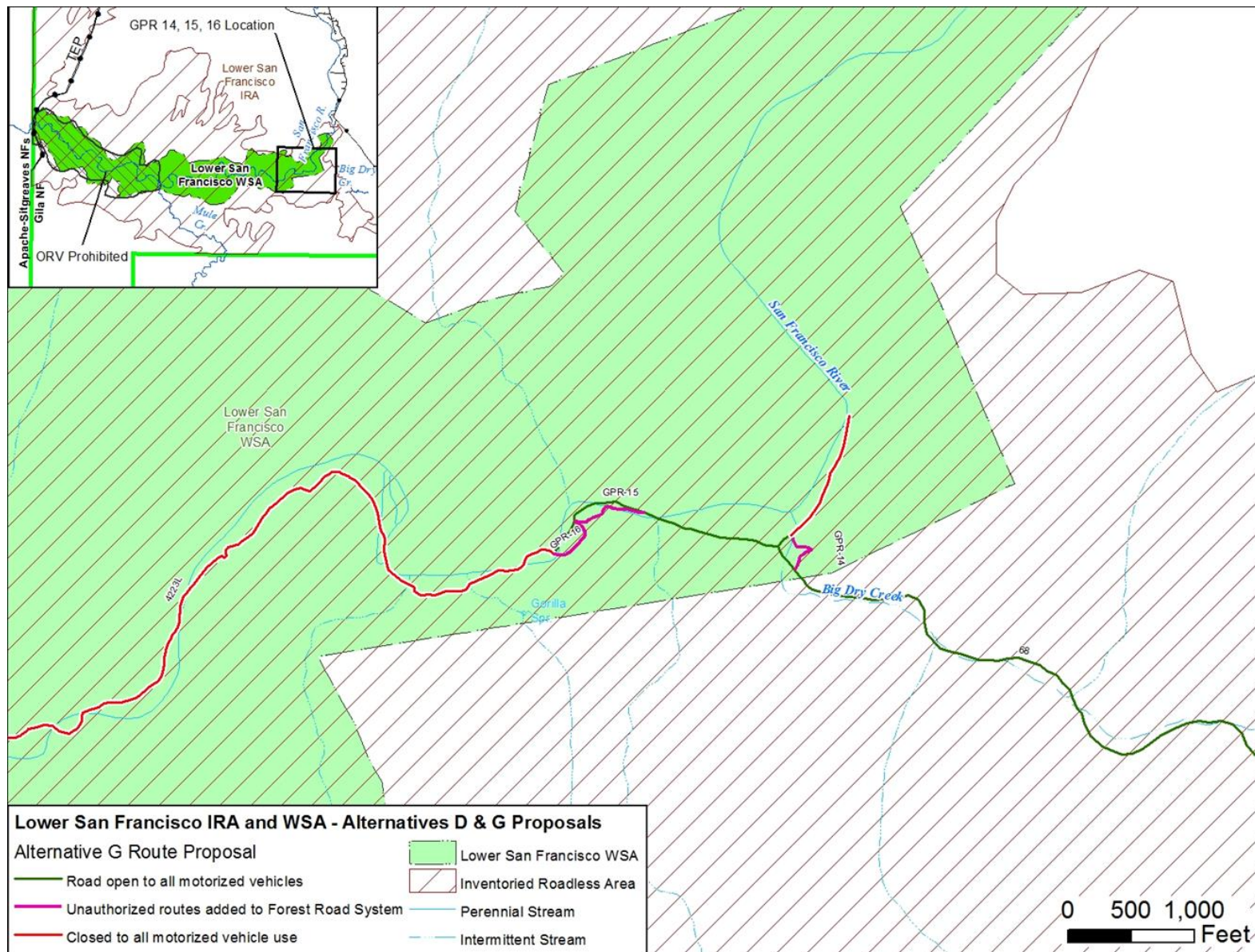


Figure 3. Lower San Francisco Inventoried Roadless Area and Wilderness Study Area Alternatives D and G proposals

Alternative E

Alternative E proposes to close motorized access along the San Francisco River and end motorized use at Big Dry at Estes Well. Alternative E proposes 4.0 miles of road, a reduction of 6.6 miles within the San Francisco WSA. No miles or acres of MDC or MBGR or Motorized Areas are proposed for designation within this WSA.

Alternative F

Alternative F proposes to allow motorized use from Highway 180 to Mule Creek down the San Francisco River. This Alternative proposes to allow MDC from Highway 180 to the confluence of the San Francisco River and Big Dry Creek. Alternative F proposes 8.0 miles of road, a reduction of 0.2 miles within the WSA. This alternative proposes 0.5 miles/37.6 acres of MDC and 8.0 miles/ 3,328 acres ½ mile off both sides of roads for MBGR for elk only.

Alternative G

Alternative G allows motorized use in Little and Big Dry Creeks. This Alternative proposes to close routes along the San Francisco River. MDC is proposed at the confluence of Big Dry and the San Francisco River. No motorized access will be allowed along the River. Alternative G proposes 0.7 miles of road, a reduction of 7.5 miles within the WSA, a 91 percent reduction. This Alternative proposes the same 0.0 miles/0.27 acres of MDC and MBGR as Alternative D. This acreage is from Road 4075D located on the southern rim of the San Francisco River Canyon near the Arizona state boundary outside of the WSA. Big game retrieval for elk and deer is proposed within the same corridors 300- ft. off both sides of the road for dispersed camping. The same unauthorized routes Glenwood Proposed Routes (GPR) 14, 15, and 16 totaling 0.3 miles proposed in Alternative D are proposed to be designated as open to all vehicle types in Alternative G.

Environmental Consequences – WSAs and Associated IRAs**Analysis Methods**

In this analysis, potential impacts to Wilderness Study Areas and their values are discussed for the purpose of compliance with the National Environmental Policy Act, which requires disclosure of expected impacts to forest resources. This analysis is not meant to have any bearing on proposing these areas for Wilderness designation other than to understand the potential effects to wilderness character and roadless characteristic values from the proposed Action Alternatives. The analysis also includes the consideration of irreversible and irretrievable commitments of resources on Wilderness Character and Roadless Area Characteristics effects for potential designation as wilderness under the 1964 Act. The document “Applying the concept of wilderness character to national forest planning, monitoring, and management” (Landres et al. 2008) was used to direct the analysis on wilderness character.

The 4 Qualities of Wilderness Character listed below were considered in this analysis.

- Untrammelled
Wilderness is essentially unhindered and free from modern human control or manipulation.
- Natural
Wilderness ecological systems are substantially free from the effects of modern civilization.
- Undeveloped
Wilderness is essentially without permanent improvements or modern human occupation.

- Solitude or Primitive unconfined recreational opportunities
Wilderness provides outstanding opportunities for people to experience solitude or primitive and unconfined recreation

Each Roadless Characteristic is discussed below for the IRA area contained within the two WSAs. :

- Soil, water, and air resources
- Sources of public drinking water
- Diversity of plant and animal communities
- Habitat for TES and species dependent on large undisturbed areas of land
- Primitive and semi-primitive motorized and non-motorized classes of recreation,
- Reference landscape for research study or interpretation
- Natural appearing landscapes with high scenic quality
- Traditional cultural properties and sacred sites
- Other locally unique characteristics -

The Wilderness Character and Roadless characteristics listed above are the indicators used in this Wilderness Study Area Analysis for both the Hell Hole and Lower San Francisco WSAs. This analysis used the Forest Geographic Information System coverage of Wilderness Study Areas and Inventoried Roadless Areas. WSA GIS acres differ from the acres listed in PL 96-550 for both WSAs.

Effects Common to All Action Alternatives Regarding Wilderness Character within Wilderness Study Areas

- All Action Alternatives would prohibit motorized cross-country travel in WSAs. Roads would be non-motorized, unless designated open. However, physical barriers or rehabilitation of roadbeds would require a separate NEPA decision. With the prohibition on motorized cross-country travel and the reduction of where people can drive, there is a potential to improve all four wilderness characteristics in both Wilderness Study Areas as described in the following bullets.
 - ♦ Reduced motorized access adjacent to Wilderness Study Areas has the likelihood to reduce intrusions and the influence of modern human activities within the WSAs which would improving the Untrammeled, and Undeveloped characteristics.
 - ♦ Fewer intrusions would reduce resource damage and improve Visual Quality Objectives improving the Natural characteristic.
 - ♦ In particular, the prohibition on motorized cross- country would reduce the encroachment of sight and sound across the boundary of the Wilderness Study Areas improving the Wilderness Character of Solitude.
- In keeping with preserving all 4 Wilderness Characteristics within both WSAs
 - ♦ No Motorized Areas are proposed within the Hell Hole and Lower San Francisco WSAs in any of the Action Alternatives.
 - ♦ No new Motorized Trail Routes are proposed within the Hell Hole and Lower San Francisco WSAs in any of the Action Alternatives.
 - ♦ All Action Alternatives propose a reduction in road miles as described above.

- Parking off -roads would be limited to a maximum of one vehicle length including a trailer. This limitation would reduce impacts to vegetation and soils within WSAs that is caused by parking further off roadways improving the Natural, Undeveloped and Untrammeled characteristics.
- All Action Alternatives decrease the miles of Roads within WSAs. See Table WSA B2 of Appendix B of this document. Proposing fewer roads than people are driving now within WSAs means visitors will be restricted from places they have traditionally accessed with a vehicle. Recreationists accustomed to traveling the roads proposed for closure may be dissatisfied and may not continue to recreate within the WSAs. A reduction in roads has the potential to improve all 4 Wilderness Characteristics.
- All roads including unauthorized routes that are proposed to be maintained on the road and motorized trail system within WSAs already have a footprint on the ground and are currently being used by the public. There is not an expected change in use or change in resource condition of these existing routes as a result of implementation of the Action Alternatives. If these routes are not designated and are unavailable for use, traces of the route will likely remain for a long time. In Hell Hole this would occur especially on those routes on steep slopes where erosion often prevents plants from growing back. In the Lower San Francisco with the routes located in the river bottom, flooding would be expected to remove the routes within 10 years. This would affect the Wilderness characteristics of Natural, Untrammeled, and Undeveloped. (See Watershed and Soils section).
- No unauthorized routes are proposed to be maintained on the road system within the Hell Hole WSA. There is the potential for dissatisfaction from recreationists who currently travel on any unauthorized routes with a motorized vehicle. This has the potential to improve the Wilderness Character of Undeveloped. There is a potential for improvement to the characteristics of Natural and Untrammeled, due to the revegetation of these routes over time. However, as described above, the traces of these routes would likely remain for a long time, especially those routes on steep slopes where erosion often prevents plants from growing back.
- The proposal reduces the chance of visitors meeting others due to a reduction in motorized access in and adjacent to WSAs and the prohibition on motorized cross-country travel improving the wilderness character of Solitude. The majority of visitors to both WSAs do not travel more than ½ mile from their vehicles. Therefore, those individuals willing to hike would have an increased opportunity for Solitude in all Action Alternatives.
- No Motorized Trail Routes are proposed within the Hell Hole or Lower San Francisco WSAs in any of the Action Alternatives. There is no effect since this is no change from the No Action Alternative B.
- No Motorized Areas are proposed within the Hell Hole or Lower San Francisco WSAs in any of the Action Alternatives. There could be visitor dissatisfaction by those forest visitors who currently travel cross-country, or access dispersed sites with a vehicle within either IRA. This would improve all 4 qualities of Wilderness Character. See discussion above on the prohibition of cross-country travel within both IRAs.
- By designating routes and prohibiting off road travel, law enforcement for illegal firewood theft would be simplified. Motorized vehicle use off of designated routes would be prohibited.

Table 8. Miles of route types within wilderness study areas*

Wilderness Study Area	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Hell Hole WSA Miles of Open Road*	10.7	5.7	2.4	4.0	2.1	4.4
Hell Hole WSA Miles of Road for Periodic Administrative Use or By Written Authorization	0.0	3.0	4.1	2.5	4.7	3.0
Lower San Francisco Miles of Open Road*	8.2	8.1	0.7	0.0	8.0	0.7
Lower San Francisco Unauthorized Route proposed to maintain and NFS roads and open to all vehicles	0.0	0.0	0.3	0.0	0.0	0.3
Total Miles of Road Open to the Public	19.0	13.8	3.1	4.0	10.2	5.1

*Miles of Open Road includes public access roads including county and state highways

** See Tables WSA B-1 –B3 located in Appendix B of this document

Table 9 that follows describes the effects on the four qualities of Wilderness Character for each Alternative using the data above and the data tables located in Appendix B of this document for both WSAs.

Table 9. Effects analysis – wilderness character for both wilderness study areas

Wilderness Character	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
<p>Natural Wilderness ecological systems are substantially free from the effects of modern civilization.</p> <p>With the prohibition on cross-country travel proposed in all Action Alternatives, the only acres of the WSAs that would be vulnerable to motorized use and associated human impacts to vegetation and soils would be the corridors proposed for MDC and MBGR.</p> <p>The Natural Characteristic of both WSAs has a potential to improve under all Action Alternative due to the reduction in cross-country travel.</p> <p>See Appendix B Table WSA B4. and Table WSA B5. for total miles/acres MDC and MBGR in</p>	<p>Hell Hole WSA has impacts from illegal firewood theft over the past 10 years including unauthorized roads and loss of large green and dead Alligator juniper trees.</p> <p>Both WSAs are currently open to motorized cross country travel resulting in some unauthorized routes and associated damage to vegetation and soils.</p> <p>All acres within the WSA would continue to be vulnerable to motorized use and associated human impacts to vegetation and soil from unlimited motorized cross-country travel.</p>	<p>Alternative C proposes 300 ft. corridors for MDC along both sides of roads and 1 mile corridors for MBGR along both sides of roads:</p> <p><u>Hell Hole WSA</u> MDC 1.4 miles/114 acres MBGR 5.7 miles/9,777 acres</p> <p><u>Lower SF WSA</u> MDC 8.1miles/580 acres MBGR 8.1 miles/4,062 acres</p> <p>Alternative C proposes the most miles/acres of MDC and MBGR. These acres would be vulnerable to human impact by motorized vehicle use and associated activities.</p>	<p>Alternatives D & G propose 300 ft. corridors for MDC and MBGR along both sides of roads.</p> <p><u>Hell Hole WSA</u> MDC & MBGR 0.23 miles/21.71 acres</p> <p><u>Lower SF WSA</u> MDC & MBGR miles/0.27 acres</p> <p>The proposed 0.27 acres of MDC and MBGR is accessed from Road 4075D located on the southern rim of the San Francisco River Canyon near the Arizona state boundary outside of the WSA.</p> <p>Of the Action Alternatives, Alternatives D & G would cause less impacts from motorized use and associated human impacts to vegetation than Alternatives C, and</p>	<p>Alternative E proposes no corridors for MDC or MBGR within either WSA.</p> <p>Of the Action Alternatives, Alternative E would cause the least impacts from motorized use and associated human impacts to vegetation and soils. The Natural Characteristic of both WSAs has the most potential to improve under this Alternative.</p>	<p>Alternative F proposes 300 ft. corridors for MDC along both sides of roads and 1/2 mile corridors for MBGR along both sides of roads.</p> <p><u>Hell Hole WSA</u> MDC 0.26 miles/29.02 acres MBGR 2.13 miles/3,818 acres</p> <p><u>Lower SF WSA</u> MDC 0.48miles/37.68 acres MBGR 8.07 miles/3,328 acres</p> <p>Alternative F proposes less miles/acres of MBGR than Alternative C, but more than Alternatives D, E and G.</p> <p>Therefore acres vulnerable to human</p>	<p>Alternative G proposes 300 ft. corridors for both MDC and MBGR along both sides of roads. The same as Alternative D. See effects of Alternative D.</p> <p><u>Hell Hole WSA</u> MDC & MBGR 0.23 miles/21.71 acres</p> <p><u>Lower SF WSA</u> MDC & MBGR miles/0.27 acres</p>

Wilderness Character	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
WSAs.			F.		impact by motorized vehicle use and associated activities would be less than Alternative C and more than Alternatives D, E and G.	
<p>Untrammeled Wilderness is essentially unhindered and free from modern human control or manipulation.</p> <p>There would be no change to existing grazing permits in either WSA in any alternative.</p> <p>With the prohibition on cross-country travel and designation of routes proposed in all Action Alternatives, the only acres of the WSAs that would be available for motorized use would be the designated routes and corridors proposed for MDC and MBGR. See Natural above regarding MDC and MBGR.</p>	<p>All acres within the WSA would continue to be vulnerable to motorized use and the signs of human control and manipulation due to both WSAs currently being open to motorized-cross country travel.</p>	<p><u>Hell Hole WSA</u></p> <p>Nearly half of the existing roads (5.0 miles) are proposed for closure in Alternative C. This Alternative offers the most motorized opportunities within the Hell Hole WSA.</p> <p><u>Lower SF WSA</u></p> <p>Similar miles of road are proposed as in Alternative B, No Action and Alternative F. See Effects of Alternative B.</p>	<p><u>Hell Hole WSA</u></p> <p>Alternative D proposes 2.4 miles of road to remain open within the WSA.</p> <p><u>Lower SF WSA</u></p> <p>Alternative D proposes 0.7 miles of road to remain open within the WSA.</p> <p>Existing Unauthorized Routes Glenwood Proposed Routes (GPR) 14 – 16 totaling 0.3 miles are proposed to maintain as road open to all vehicle types.</p> <p>These routes already have a footprint on the ground and are currently being used by the public. There</p>	<p><u>Hell Hole WSA</u></p> <p>Alternative E proposes 4.0 miles of road to remain open within the WSA.</p> <p><u>Lower SF WSA</u></p> <p>Alternative E proposes 0.0 miles of road to remain open within the WSA. This Alternative poses the least miles or River Access within the Lower San Francisco WSA.</p>	<p><u>Hell Hole WSA</u></p> <p>Alternative F proposes 2.1 miles, the least miles of road to remain open providing motorized opportunities within the WSA.</p> <p><u>Lower SF WSA</u></p> <p>Alternative F proposes 8.0 miles of road to remain open within the WSA.</p>	<p><u>Hell Hole WSA</u></p> <p>Alternative G proposes 4.4 miles of road to remain open within the WSA.</p> <p><u>Lower SF WSA</u></p> <p>Alternative G proposes the same 0.7 miles of road to remain open within the WSA as in Alternative D.</p> <p>Existing Unauthorized Routes Glenwood Proposed Routes (GPR) 14 – 16 totaling 0.3 miles are proposed to maintain as road open to all vehicle types as in Alternative D. See effects for Alternative D.</p>

Wilderness Character	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
All Action Alternatives propose a reduction of miles of road open to the public within both WSAs providing areas free from modern human control and manipulation.			is not an expected change in use or change in resource condition of these existing routes. With these routes located in the River bottom, flooding would be expected to remove the routes within 10 years.			
Undeveloped Wilderness is essentially without permanent improvements or modern human occupation.	<p><u>Hell Hole WSA</u> There are some signs of human activity including approximately 24 developed springs and tanks, .4 miles of distribution pipeline, and 8 stock handling corrals.</p> <p>There are approximately 15 miles of exterior boundary fence/ROW fence and 8 miles of interior fence.</p> <p><u>Lower San Francisco WSA</u> There is one corral and 3 seasonal spring developments.</p> <p>There are 0.2 miles of allotment</p>	<p>There would be no change from the No Action Alternatives. There are currently no proposals to change or add any new range developments; however, existing developments will be retained or reconstructed as needed.</p> <p>By reducing motorized access to the WSAs, there would be an associated increase in cost due to time needed to monitor and address illegal livestock use, range development maintenance, and trespass occupancy.</p>				

Wilderness Character	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
	<p>boundary fence and 1.5 miles of interior fence.</p> <p>There is scattered evidence of illegal occupancy, exclusively within the Lower San Francisco River.</p> <p>Currently these developments are maintained or reconstructed as needed.</p>					
<p>Outstanding opportunities for solitude or a primitive and unconfined type of recreation Wilderness provides outstanding opportunities for people to experience solitude or primitive and unconfined recreation, including the values of inspiration and physical and mental challenge.</p>	<p>Both WSAs have opportunities for solitude and primitive and unconfined recreation because of rugged terrain and limited access. Recreation opportunities include hiking, hunting, viewing wildlife and photography. The rugged terrain and steep canyons contribute to a sense of solitude.</p> <p>The Lower San Francisco WSA provides opportunities to picnic, fish and hunt.</p>	<p>See Natural and Untrammelled above. Of the Action Alternatives, Alternative C proposes the most motorized opportunities providing the least opportunity for Solitude or primitive and unconfined type of recreation within both WSAs.</p>	<p>See Natural and Untrammelled above.</p> <p>Alternatives D & G would provide more opportunities for Solitude than Alternatives C, and F.</p>	<p>See Natural and Untrammelled above. With no opportunities for MDC and MBGR provided in Alternative E, it provides the most opportunities for Solitude.</p> <p><u>Hell Hole WSA</u> Alternative E proposes 4.0 miles of road to remain open within the WSA providing motorized access within the WSA, however reduced from Alternative B No Action.</p>	<p>See Natural and Untrammelled above.</p> <p>Alternative F proposes ½ mile corridors for MBGR which would provide less opportunities for Solitude than Alternatives D, E and G.</p>	<p>See Natural and Untrammelled above and Alternative D.</p> <p><u>Hell Hole WSA</u> Alternative E proposes 4.4 miles of road to remain open within the WSA providing motorized access within the WSA, however reduced from Alternative B No Action.</p> <p><u>Lower SF WSA</u> Alternative E proposes 0.7 miles of road access reduced from Alternative B No</p>

Wilderness Character	Effects of Alternative B (No Action)	Effects of Alternative C	Effects of Alternative D	Effects of Alternative E	Effects of Alternative F	Effects of Alternative G
	<p>In May and June when water is high, rafting and kayaking occurs.</p> <p>Due to no prohibition on cross-country travel this Alternative provides the least opportunities for Solitude with in both WSAs.</p>			<p><u>Lower SF WSA</u></p> <p>Alternative E proposes no miles of road access providing the most opportunity for Solitude within the Lower San Francisco River corridor and WSA.</p>		<p>Action. This Alternative improves the opportunity for Solitude within the Lower San Francisco River corridor and WSA.</p>

Roadless Characteristics within the Hell Hole WSA/IRA

The following analysis identifies effects to the Roadless Characteristics of the Hell Hole IRA with a narrower focus on the river corridor within the Hell Hole WSA.

Soil, Water, Aquatic, and Air Resources

Soils Analysis

Each of the alternatives was evaluated to determine the effects of a motorized route system on the Gila National Forest to the Hell Hole Wilderness Study Area in regards to impacts to soils. The following two tables show the route prism acres by alternative that are located on soils with moderate and severe erosion hazard ratings and soils with unsatisfactory and unsuited soil condition ratings. These ratings were derived from the General Terrestrial Ecosystem Survey (GTES), which is an ecological unit inventory that maps soils, geology, climate and potential natural vegetation and was used for the TMR soils analysis.

Table 10. Route prism acres by GTES moderate and severe erosion hazard rating

Severity Rating	GTES Route Acres Alt B	GTES Route Acres Alt C	GTES Route Acres Alt D	GTES Route Acres Alt F	GTES Route Acres Alt G
Acres	12.04	11.74	1.12	11.74	1.12

Table 11. Hell Hole route prism acres by GTES moderate and high erosion hazard rating

Sum of Hell Hole GTES Route Acres	GTES Route Acres Alt B	GTES Route Acres Alt C	GTES Route Acres Alt D	GTES Route Acres Alt E	GTES Route Acres Alt F	GTES Route Acres Alt G
Moderate	4.48	4.48	4.48	4.48	4.48	4.48
Road 4075 U	0.62	0.62	0.62	0.62	0.62	0.62
M	0.62	0.00	0.00	0.00	0.00	0.00
NM	0.00	0.62	0.62	0.62	0.62	0.62
Road 8345	3.87	3.87	3.87	3.87	3.87	3.87
M	3.87	0.00	0.00	2.80	0.00	0.00
SP	0.00	3.87	3.87	1.07	3.87	3.87
Grand Total	4.48	4.48	4.48	4.48	4.48	4.48

M – NFS road to remain open to all motor vehicles

NM – NFS roads proposed to be closed to all motorized vehicle uses

SP – roads open for periodic administrative use or by written authorization only

Table 12. Hell Hole route prism acres by GTES unsuited and unsatisfactory soil condition rating

Sum of Hell Hole GTES Route Acre	GTES Route Acres Alt B	GTES Route Acres Alt C	GTES Route Acres Alt D	GTES Route Acres Alt E	GTES Route Acres Alt F	GTES Route Acres Alt G
Unsuited	0.06	0.06	0.06	0.06	0.06	0.06
NM-78	0.06	0.06	0.06	0.06	0.06	0.06
SH - State Highway	0.06	0.06	0.06	0.06	0.06	0.06
Unsuited	4.48	4.48	4.48	4.48	4.48	4.48
Road 4075 U	0.62	0.62	0.62	0.62	0.62	0.62
M	0.62	0.00	0.00	0.00	0.00	0.00
NM	0.00	0.62	0.62	0.62	0.62	0.62
Road 8345	3.87	3.87	3.87	3.87	3.87	3.87
M	3.87	0.00	0.00	2.80	0.00	0.00
SP	0.00	3.87	3.87	1.07	3.87	3.87
Grand Total	4.54	4.54	4.54	4.54	4.54	4.54

All alternatives impact the same amount of acres of soils with moderate erosion potential and unsuited and unsatisfactory soil condition.

Effects of routes to soils include soil compaction, loss of soil productivity, concentrated runoff resulting in erosion and sediment production, and loss of vegetative ground cover of existing routes. The presence of roads across the Gila National Forest has already resulted in negative impacts to the soil resource. There has been a commitment of the soil resource when the route was established, which resulted in loss of soil productivity and vegetative cover. This commitment, in places, may be irreversible and/or irretrievable due to long-term compaction and off-site soil loss from the road. With the implementation of any of the action alternatives, there will be a continued commitment of the soil resource and associated negative impacts, with effects remaining the same, increasing, or decreasing. Impacts to the soil resource will vary to some degree by alternative, with the potential for negative impacts varying by the number of roads that will remain open for motorized use. Routes located on soils with moderate and high erosion potential and unsuited and unsatisfactory soil condition typically are more susceptible to erosion and subsequent sedimentation and loss of soil productivity than soils with slight erosion potential ratings and satisfactory soil conditions. See Watershed and Soils Specialist Report (USDA Forest Service 2013d).

Each of the alternatives was analyzed to determine if there is potential for a motorized route system on the Gila National Forest to impact the Hell Hole Wilderness Study Area (WSA) and IRA relative to water quality and riparian values.

Water Quality:

There are currently 71 motorized route crossings within the WSA. Alternatives D and E provides the most reduction (-23 percent) of these motorized crossings, with Alternative F close behind with a reduction of 21 percent of motorized crossings. Alternative G reduces motorized crossings by 14 percent, with Alternative C reducing motorized crossings by 1 percent. Alternatives D, E, and F provide the most opportunity to reduce direct impacts to water quality as mobilization of stream bottom sediments from motorized traffic would be greatly limited with the reduction and/or elimination of stream crossings. In addition, once recovery of riparian vegetation occurs at the ingress and egress point of the crossings, this vegetation can serve as a filter for sediment movement that may occur during precipitation events along current route/crossing paths.

There are no waterbodies within the WSA/IRA currently documented on New Mexico's 2012-2014 303(d) list of impaired waterbodies.

There are currently 7.47 miles of perennial, intermittent, and ephemeral waterbodies within the Hell Hole WSA. In review of motorized routes within 300 feet of these water bodies, Alternative D provides the most reduction (-32 percent) of motorized routes within the 300 feet. Alternative E is close behind with a reduction of 31 percent of motorized routes within the 300 feet. Alternative F reduces these routes by 27 percent and Alternative G reduces routes within the 300 feet by 19 percent. Alternative C reduces motorized routes within 300 feet by the least amount (-7 percent). Alternatives D, E, and F provide the most opportunity to reduce the risk for potential road-related sediment to enter into the drainage network. Hydrologic impacts would not be immediately eliminated, but would rather be dependent on natural recovery and successful revegetation of the current route paths.

Riparian Areas:

There are currently 1.65 acres associated with motorized routes within riparian areas located in the Hell Hole WSA. None of the alternatives propose to make any changes to motorized routes within these riparian areas. There will be no change to riparian habitat under any action alternative.

Summary:

Overall, Alternatives D, E, and F reduce the potential risk of impacts to water quality within the Hell Hole WSA by the most amount, with Alternative G following. Alternative C shows the least amount of potential reduction of impacts. None of the alternatives proposed to change motorized route impacts to riparian areas.

The following tables (Table 13, Table 14, and Table 15) provide further information related to motorized routes within the Hell Hole WSA and potential impacts to water quality and riparian areas.

Table 13. Hell Hole Wilderness Study Area and Inventoried Roadless Area motorized stream crossings

Motorized Route Stream Crossings	Alt B - No Action	Alt C	Alt D	Alt E	Alt F	Alt G
Coal Creek	18	18	18	18	18	18
Mule Creek	6	6	0	0	1	6
Unnamed	47	46	37	37	37	37
Grand Total	71	70	55	55	56	61
Difference in Motorized Route Stream Crossings		-1	-16	-16	-15	-10
Change in Percentage		-1%	-23%	-23%	-21%	-14%

Table 14. Hell Hole Wilderness Study Area and Inventoried Roadless Area stream miles within 300 feet of open, motorized routes

Waterbodies	Alt B- No Action (acres)	Alt C (acres)	Alt D (acres)	Alt E (acres)	Alt F (acres)	Alt G (acres)
Perennial	0.94	0.94	0.00	0.00	0.35	0.94
Mule Creek	0.66	0.66	0.00	0.00	0.06	0.66
Unnamed	0.29	0.29	0.00	0.00	0.29	0.29
Intermittent	1.34	1.34	1.34	1.34	1.34	1.34
Coal Creek	1.34	1.34	1.34	1.34	1.34	1.34

Waterbodies	Alt B- No Action (acres)	Alt C (acres)	Alt D (acres)	Alt E (acres)	Alt F (acres)	Alt G (acres)
Ephemeral	5.19	4.65	3.73	3.82	3.73	3.76
Coal Creek	1.67	1.67	1.67	1.67	1.67	1.67
North Fork Tennessee Creek	0.26	0.00	0.00	0.00	0.00	0.00
Sawmill Creek	0.80	0.80	0.52	0.52	0.52	0.52
Tennessee Creek	0.48	0.21	0.00	0.08	0.00	0.00
Unnamed	1.98	1.98	1.55	1.55	1.55	1.57
Grand Total	7.47	6.93	5.07	5.16	5.42	6.04
Difference in Stream Crossings		-0.53	-2.40	-2.31	-2.05	-1.43
Change in Percentage		-7%	-32%	-31%	-27%	-19%

Table 15. Hell Hole Wilderness Study Area and Inventoried Roadless Area acres of motorized routes within riparian areas

Habitat Type and Route Designation	Alt B – No Action (acres)	Alt C (acres)	Alt D (acres)	Alt E (acres)	Alt F (acres)	Alt G (acres)
Arizona Walnut	0.25	0.25	0.25	0.25	0.25	0.25
Motorized –	0.25	0.25	0.25	0.00	0.00	0.25
Motorized Single Purpose	0.00	0.00	0.00	0.25	0.25	0.00
Ponderosa Pine/Willow	1.41	1.41	1.41	1.41	1.41	1.41
Motorized	1.41	0.00	0.00	1.26	0.00	0.00
Motorized Single Purpose	0.00	1.41	1.41	0.15	1.41	1.41
Grand Total	1.65	1.65	1.65	1.65	1.65	1.65
Difference in Stream Crossings		0.00	0.00	0.00	0.00	0.00
Change in Percentage		0%	0%	0%	0%	0%

Motorized – NFS roads to remain open to all motor vehicle traffic.

Aquatics

The Hell Hole Wilderness Study Area (WSA) lies south of State Road 78 and east of the New Mexico/Arizona State Line. The area has limited aquatic resources due to the lack of perennial and intermittent water bodies. There are a few springs within the area and short reaches of perennial flow originating from these springs. Major drainages include the headwaters of Mule and Coal creeks in the northern area of the WSA and headwaters of Blue and Apache creeks to the south. These major drainages are mostly ephemeral within the WSA. There are no known, aquatic, sensitive or threatened and endangered species within the WSA. Table 16 displays the miles of routes within 300 feet of streams and the number of stream crossings by alternative.

Table 16. Hell Hole Wilderness Study Area and Inventoried Roadless Area miles of motorized routes within 300 feet of streams and number of stream crossings by alternative

Routes and stream crossings	Stream type	Route Status	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Miles of Motorized Routes within 300 ft. of Streams	Perennial and Intermittent	Motorized	2.34	0.77	0	1.41	0.86	0.77
		Administrative	0	1.57	1.57	0.15	1.57	1.57
	Ephemeral	Motorized	4.62	2.37	1.18	1.70	0.62	1.53
		Administrative	0	1.81	2.07	1.62	2.64	1.81
Total			6.96	6.52	4.82	4.88	5.69	5.68
Number of Stream Crossings	Perennial and Intermittent	Motorized	24	6	0	15	1	6
		Administrative	0	18	18	3	18	18
	Ephemeral	Motorized	47	27	16	18	2	18
		Administrative	0	19	21	19	35	19
Total			71	70	55	55	56	61

Comparison of Alternatives:

Alternative B has the greatest risk of negative impacts to aquatic resources; it includes the greatest number of stream crossings and miles of motorized routes. Of the action alternatives, Alternative C has the greatest risk of negative impacts to aquatic resources; it includes a slight decrease in the number of stream crossings and miles of motorized routes when compared to Alternative B. Alternative C also includes designating some currently motorized routes as administrative routes that would be open only by permit or for administrative purposes. Administrative routes would likely see reduced use. Alternative D would have the least risk of negative impacts to aquatic resources; this alternative has the least miles of routes, and along with Alternative E, the fewest stream crossings. Alternative E is similar to Alternative D, the number of stream crossings in each of these alternatives is the same, and Alternative E has 0.06 additional miles of routes. Alternative F and G are similar, with Alternative G having 5 more stream crossing and 0.01 miles less routes. All of the action alternatives present some level of risk to aquatic resources due to the impacts that roads close to and crossing streams have. These impacts include increased sedimentation, stream bank alteration, riparian habitat alteration, large woody debris recruitment and availability, and water quality parameters. Any decrease in the miles of routes within 300 feet or that cross streams will have positive impacts to aquatic resources.

Sources of Public Drinking Water – There are no Municipal Watersheds located within the Hell Hole WSA or IRA.

*Diversity of Plant and Animal Communities:***Habitat for TES and Species Dependent upon Large Undisturbed Areas of Land**

The Hell Hole Wilderness Study Area (WSA) lies south of State Road 78 and east of the New Mexico/Arizona State Line. Major drainages include the headwaters of Mule and Coal creeks in the northern area of the WSA and headwaters of Blue and Apache creeks to the south. These major drainages are mostly ephemeral within the WSA. There are a few springs within the area and short reaches of perennial flow originating from these springs. These drainages and spring areas have low and middle elevation riparian type habitat. The majority of the uplands are piñon -juniper/shrub oak woodland type habitat with pockets of ponderosa pine, desert shrub/grassland, and plains/mountain grassland type habitat.

Wide ranging, federally listed, and Regional Forester sensitive species and species groups/focal groups that have the potential to be affected include:

- Large Ungulates – deer and elk. These two wide ranging species have the potential to occur in all the habitat types in this WSA.
- Wide Ranging Carnivores - including bears, mountain lions, and wolves (federally listed as threatened). These three wide ranging species have the potential to occur in all the habitat types in this WSA.
- Small Mammals – Hooded skunk, Botta's pocket gopher, White-nosed coati, Western red bat, and Arizona gray squirrel. These five Regional Forester Sensitive species are associated with riparian habitat in this WSA. Gunnison's prairie dog and White Mountain ground squirrel are sensitive species found in plains and mountain grassland habitat. A very small amount of this type of habitat occurs in this area; therefore, is unlikely that these species would be affected.
- Amphibians and Reptiles – Arizona toad is a designated sensitive species that is associated with riparian type habitat. Reticulate Gila monster is a sensitive species found in desert shrub and grassland habitat. A very small amount of this type of habitat occurs in this area; therefore, is unlikely that this species would be affected.
- Raptorial Birds – Northern Goshawk is a regional sensitive species that has nest and post-family fledging area (PFA) in this WSA. Other raptors that may occasionally forage in the area, but are not known to roost or nest in this WSA are Peregrine Falcon, Bald Eagle, and Golden Eagle. The peregrine and bald eagle are both designated sensitive species and wide ranging. The golden eagle is a wide ranging species.
- Primary Cavity Nesters – Hairy Woodpecker is a wide ranging species that has habitat in the ponderosa pine vegetation type in this area.
- Riparian Birds – Northern Gray Hawk, Western Yellow-billed Cuckoo, Arizona Bell's Vireo, Abert's Towhee, Gila Woodpecker, Common Ground Dove, and Black Hawk all are designated sensitive species that have the potential to occur in the small amount of low and middle elevation riparian habitat that is located in this area.
- Woodland Birds – Plains Titmouse, and Gray Vireo are designated sensitive species that occur in the piñon-juniper/shrub oak woodland type habitat.
- Forested and Grassland Birds – Costa's Hummingbird is a sensitive species that occurs in the desert shrub and grassland type habitat. White-eared Hummingbird is a sensitive species that is associated with ponderosa pine type habitat. The Burrowing Owl is a sensitive species that is associated with plains and mountain grassland type habitat. All have the potential to occur in the small amount of desert shrub/grassland, ponderosa pine, and plains and mountain grassland habitat that is located in this area.
- Game Birds – Mearns' quail and Wild Turkey are wide ranging species that occur in the project area, and have the potential to occur in all the habitat types associated with this WSA.

See Wildlife Specialists Report (USDA Forest Service 2013g) for description of motorized route effects to species groups/focal groups listed above.

Table 17. Hell Hole Wilderness Study Area wildlife habitat route miles*

Wildlife Habitat	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Desert Shrub/Grassland	0.10	0.10	0.00	0.00	0.00	0.00
01-Open Existing ML 2 - ML 5	0.10	0.10	0.00	0.00	0.00	0.00
Low Riparian	0.25	0.25	0.25	0.25	0.25	0.25
01-Open Existing ML 2 - ML 5	0.25	0.25	0.25	0.00	0.00	0.25
03-Administrative Route	0.00	0.00	0.00	0.25	0.25	0.00
Mid Riparian	1.41	1.41	1.41	1.41	1.41	1.41
01-Open Existing ML 2 - ML 5	1.41	0.00	0.00	1.26	0.00	0.00
03-Administrative Route	0.00	1.41	1.41	0.15	1.41	1.41
Piñon Juniper/Shrub Oak Woodland	8.26	6.27	4.33	4.39	4.61	5.14
01-Open Existing ML 2 - ML 5	7.96	4.77	1.63	2.08	1.60	3.64
03-Administrative Route	0.00	1.21	2.40	2.02	2.72	1.21
13-US Hwy, State Hwy, County Rd	0.29	0.29	0.29	0.29	0.29	0.29
Plains Grassland/Mountain Grassland	0.01	0.01	0.01	0.01	0.01	0.01
01-Open Existing ML 2 - ML 5	0.01	0.01	0.01	0.01	0.01	0.01
Ponderosa Pine	0.73	0.73	0.61	0.61	0.61	0.61
01-Open Existing ML 2 - ML 5	0.73	0.34	0.23	0.44	0.23	0.23
03-Administrative Route	0.00	0.38	0.38	0.17	0.38	0.38
Grand Total	10.75	8.76	6.60	6.66	6.88	7.41

*Route miles by Management Indicator Species (MIS) habitat

Comparison of Alternatives:

Alternatives B and C have the greatest risk of causing negative impacts to the wide ranging and threatened/endangered/sensitive (TES) species that occur in all the habitat types listed above; the exception is in the piñon-juniper woodland habitat type. There are more route miles in Alternative B which would cause more direct and indirect effects than Alternative C. Alternatives D, E, F, and G cause the same level of indirect and direct effect as Alternatives B and C for species that are associated with riparian, and plains/mountain grassland habitat since all these alternatives have the same amount of routes in these habitat types. For species associated with desert shrub/grassland and ponderosa pine type habitats Alternative D, E, F, and G reduce the potential to cause direct and indirect effects below the level of Alternatives B and C. In the piñon-juniper/shrub oak woodland habitat type Alternative D, E, F, G, and C reduce the potential to cause direct and indirect effects to the species associated with this habitat type below Alternative B. Each Alternative is listed by a greater level of effect in the order they are listed, respectively.

A goshawk nest and PFA area have been identified in this WSA. On the Gila National Forest, nests have also typically been located in ponderosa pine vegetation.

A Post-fledging Family Area (PFA) is the area of concentrated use by the goshawk family after the young leave the nest (Reynolds et al. 1992). The PFA surrounds the nest and is approximately 600 acres. The Forest Plan Amendment standards and guidelines state: Limit human activity in PFAs during the breeding season; limit human activities in or near nest sites and post-fledging family areas during the breeding season; manage road densities at the lowest level possible.

Certain kinds of human disturbances to goshawk nests have been speculated to cause nest abandonment (Reynolds et al. 1992). A study investigating effects of logging truck noise caused no discernible

behavioral response by goshawks at distances greater than 400 m from nest sites (Grubb et al. 1998). Gaines et al (2003) suggest that the nesting period and post-fledging periods for goshawks be critically evaluated for disturbance affects. The PFA is an area of use from the time the young fledge to the time when they are no longer dependent on the adults for food. Managers recommend a 400 to 500 meter radius to buffer goshawk nest sites in order to protect them from disturbance during the breeding season (Call 1979 and Jones 1979). Loss of goshawk habitat due to fragmentation from roads bisecting forested areas was identified as a detrimental effect to the species due to reduction in prey base (Wisdom et al. 2000). This species is sensitive to changes in canopy closure and habitat fragmentation (BISON-M 2010b). To analyze effects to this species from the existing condition and the change proposed in each alternative of the Travel Management Project on the GNF analysis will focus on two factors:

1. To analyze the potential for direct effects of motorized activities to Northern Goshawks we will measure road miles within PFAs as these densities pertain to the existing condition and the change proposed in each alternative.
2. To analyze disturbance effects we will use a disturbance zone of 400 meters within PFAs as it pertains to the existing condition and the change proposed in each alternative.

Table 18. Hell Hole Wilderness Study Area and Inventoried Roadless Area goshawk post-fledging area route miles

Goshawk PFA Route Miles	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
01-Open Existing ML 2 - ML 5	0.89	0.89	0.0	0.0	0.07	0.57
Road 4075 P	0.31	0.31	0.0	0.0	0.00	0.00
Road 4075 R	0.07	0.07	0.0	0.0	0.07	0.07
Road 4236 G	0.50	0.50	0.0	0.0	0.00	0.50
Grand Total	0.89	0.89	0.0	0.0	0.07	0.57

Table 19. Hell Hole Wilderness Study Area and Inventoried Roadless Area goshawk post-fledging area indirect effects by acre

Routes within 400m of a PFA and Acres of goshawk habitat being affected	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
01-Open Existing ML 2 - ML 5	348	348	100	100	184	218
Grand Total	348	348	100	100	184	218

Table 18 and Table 19 identify that Alternatives B and C have the same number of miles of motorized routes and affect the same amount of acres of habitat within this PFA; the direct and indirect effects from these alternatives is greater than any of the other action alternatives. Alternatives E and D provide the greatest reduction in the level of potential effects to this PFA, and the goshawks associated with this nesting area. Alternative F provides next to the highest level of improvement above the existing condition, followed by alternative G.

There are currently no invasive species infestations identified in the Hell Hole WSA. There are very few internal roads –most roads associated with this area are on the perimeter. The fewer travel routes, the less risk for invasive species to be introduced, established, and spread due to this pathway. Due to the absence of roads, effects to the area from implementing any of the action alternatives are probably not significant and also not a significant difference by alternative. However Alternative B allows cross country travel which increases this risk. All other alternatives restrict this activity, which lowers the risk.

There are currently three grazing allotments within the Hell Hole WSA. Two of these allotments; Winchester and Mule Cr., are grazed year round on a deferred rotational system meaning pastures are deferred from grazing during the growing season to allow plants to complete the growth cycle. These pastures are then alternated annually. Key areas are monitored by Forest Service personnel to ensure pastures are not grazed beyond identified standards. Standards are currently being met. This reduces the risk of over use of the area that creates a higher disturbance and risk of the introduction, establishment and spread of invasive species. Existing improvements include numerous developed springs and tanks (approximately 37), boundary fencing (approximately 42 miles and interior fencing (approximately 24 miles. The third allotment Apache Springs is vacant.

Primitive, Semi-Primitive Non-Motorized and Semi-Primitive Motorized Classes of Dispersed Recreation

In Alternative B, the No Action Alternative, due to firewood theft, there is an extensive network of two track user created firewood access roads on the east side of the Hell Hole WSA. With no prohibition on cross-country travel there is the potential for this network of routes to continue to be used and the creation of additional unauthorized routes to continue.

The following discussion of effects of the Action Alternatives is based on the data contained in Appendix B Table WSA B1 through Table WSA B6 of this document and the above description of Proposed Changes to Motorized Access within WSAs.

Alternative C proposes the most motorized opportunities within this WSA, however recreationists that currently travel on routes proposed for closure, travel cross-country, or travel cross-country for MDC and MBGR outside of proposed corridors could be dissatisfied with a loss of these motorized opportunities. This Alternative also provides the least opportunities for Solitude and Primitive and Semi-Primitive Non-Motorized Settings.

In Alternative D, Recreationists that currently travel on routes proposed for closure or travel cross-country for MDC and MBGR outside of proposed corridors could be dissatisfied. Hunters accustomed to MBGR for bear, mountain lion, javalina and pronghorn could be dissatisfied at the loss of opportunity within the WSA. This Alternative favors Primitive and Semi-Primitive Non-Motorized activities. Hunting related ATV activities within the WSA associated with MDC and MBGR would be the same as those opportunities provided for other ATV recreationists within the Hell Hole WSA.

Alternative E provides the most solitude or primitive unconfined recreational opportunities within the WSA. There is the potential for user dissatisfaction by those who currently travel on routes proposed for closure, travel cross-country or Motorized Dispersed Camp, or practice Motorized Big Game Retrieval within the WSA.

Alternative F accommodates both motorized users and those users who prefer a more remote setting. Hunters accustomed to MBGR for deer, bear, mountain lion, javalina, and pronghorn could be dissatisfied at the loss of opportunity within the WSA.

In comparison with Alternative F, Alternative G provides less opportunity for MBGR and accommodates both motorized users and those users who prefer a more remote setting. There is a potential for hunters who prefer to retrieve game using motorized means to be dissatisfied at loss of opportunity within the Hell Hole WSA. Hunting related ATV activities within the WSA associated with MDC and MBGR would be the same as those opportunities provided for other ATV recreationists within the Hell Hole WSA.

Reference Landscapes – There are no Research Natural Areas located within the Hell Hole WSA or IRA.

Natural Appearing Landscapes with High Scenic Quality –

Visual Quality could be improved in all Action Alternatives due to the proposed prohibition on cross-country travel and limiting motorized use to designated routes within the WSA. Designation of routes would reduce the possibility of the creation/expansion of new unauthorized routes, and allow unauthorized routes to recover time.

Traditional Cultural Properties –

While no TCPs or sacred sites were identified as being affected by the Travel Management Project through consultation within the Hell Hole WSA, there is a chance that not all TCPs or sacred sites are known to the Gila NF.

Alternative B provides the maximum potential of motorized access to forest service lands through motorized cross-country travel. Therefore, Alternative B has the highest relative risk of effects to any potential TCPs or sacred site of all Alternatives.

None of the Action Alternatives propose unauthorized or ML-1 roads that will be maintained as part of the FS Trail or Road System or motorized areas within the Hell Hole WSA. Therefore, effects to potential TCPs and sacred sites may include, but are not limited to, the introduction of noise to traditional gathering areas or during other traditional activities.

Beneficial effects from the closure of routes and the prohibition of motorized cross-country travel to potential sacred sites and TCPs may include, but are not limited to, a reduction in noise, route-property intersections, and interruption of traditional activities. These beneficial effects will increase as the number of acres proposed for MDC corridors, MBGR, motorized areas, and miles of routes decrease.

Alternative C provides for the most MDC and MBGR corridors with the Hell Hole WSA. Alternative C proposes the lowest number of route closures among the Action Alternatives. Outside of Alternative B, Alternative C provides the highest relative risk of direct and indirect effects to potential sacred sites and TCPs.

Alternative D and Alternative G propose the same amount of MDC and MBGR corridors, which provides less area for such activities than Alternatives B, C, and F. Alternative D proposes the highest number of route closures among the Action Alternatives. Alternative D provides the second most beneficial effects to potential TCPs and sacred sites of all Action Alternatives. Alternative D, along with Alternative G, provides the second least relative risk of direct and indirect effects to potential TCPs and sacred sites of all Action Alternatives.

Alternative E proposes no MDC or MBGR corridors within the Hell Hole WSA. This alternative provides the most beneficial effects to potential TCPs and sacred sites of all Action Alternatives. Changes presented in Alternative E result in the least relative risk of direct and indirect effects to potential sacred sites and TCPs.

Alternative F proposes more MDC and MBGR corridors acreage than Alternatives D, G, and E, but less than Alternative B and C. Alternative F proposes more closure of routes than Alternative C and G, but less than Alternatives E and D. Alternative F has more beneficial effects than Alternative B and C, but less than E, D, and G. Changes presented in Alternative F result in less relative risk of direct and indirect effects to potential sacred sites and TCPs when compared to Alternative B and C, but more risk when compared to D, G, and E.

Alternative G and Alternative D propose the same amount of MDC and MBGR corridors, which provides less area for such activities than Alternatives B, C, and F. Alternative G proposes more miles of route

closures than C, but less than E, D, and F. Alternative G has more beneficial effects than Alternatives B, C, and F, but less than D and E. This alternative provides the second most beneficial effects to potential TCPs and sacred sites of all Action Alternatives. Alternative G, along with Alternative D, provides the second least relative risk of direct and indirect effects to potential TCPs and sacred sites of all Action Alternatives.

Lower San Francisco IRA – Roadless Characteristics within the Lower San Francisco WSA

The following analysis identifies effects to the Roadless Characteristics of the Lower San Francisco IRA with a narrower focus on the river corridor within the Lower San Francisco WSA.

Soil, Water, Aquatics, and Air Resources

Soils Analysis

Each of the alternatives was evaluated to determine the effects of a motorized route system on the Gila National Forest to the Lower San Francisco Wilderness Study Area in regards to impacts to soils. The following two tables show the route prism acres by alternative that are located on soils with moderate and severe erosion hazard ratings and soils with unsatisfactory and unsuited soil condition rating.

These ratings were derived from the General Terrestrial Ecosystem Survey (GTES), which is an ecological unit inventory which maps soils, geology, climate and potential natural vegetation and was used for the TMR soils analysis.

Table 20. Route prism acres by GTES moderate and severe erosion hazard rating by alternative

Erosion Hazard Rating	GTES Route Acres Alt B	GTES Route Acres Alt C	GTES Route Acres Alt D	GTES Route Acres Alt F	GTES Route Acres Alt G
Severe rating	12.04	11.74	1.12	11.74	1.12

Table 21. Route prism acres by GTES unsuited and unsatisfactory soil condition rating by alternative

Soil Condition Rating	GTES Route Acres Alt B	GTES Route Acres Alt C	GTES Route Acres Alt D	GTES Route Acres Alt F	GTES Route Acres Alt G
Unsuited rating	12.04	11.74	1.12	11.74	1.12

Table 22. Route prism acres by GTES moderate and high erosion hazard rating by alternative

Erosion Hazard Rating	GTES Route Acres Alt B	GTES Route Acres Alt C	GTES Route Acres Alt D	GTES Route Acres Alt F	GTES Route Acres Alt G
Severe	12.04	11.74	1.12	11.74	1.12
M	12.04	11.74	0.69	11.74	0.69
Road 4223 L	11.61	11.61	0.57	11.61	0.57
Road 68	0.42	0.12	0.12	0.12	0.12
M - P	0.00	0.00	0.43	0.00	0.43
GPR-14	0.00	0.00	0.13	0.00	0.13
GPR-15	0.00	0.00	0.17	0.00	0.17
GPR-16	0.00	0.00	0.13	0.00	0.13
Grand Total	12.04	11.74	1.12	11.74	1.12

M – NFS road to remain open to all motor vehicles

NM – NFS roads proposed to be closed to all motorized vehicle uses

SP – roads open for periodic administrative use or by written authorization

M-P – unauthorized route proposed to be added to NFS road and open to all vehicles

GPR – Glenwood Proposed Route

Table 23. Route prism acres by GTES unsuited and unsatisfactory soil condition rating

Soil Condition Rating	GTES Route Acres Alt B	GTES Route Acres Alt C	GTES Route Acres Alt D	GTES Route Acres Alt F	GTES Route Acres Alt G
Severe	12.04	11.74	1.12	11.74	1.12
M	12.04	11.74	0.69	11.74	0.69
Road 4223 L	11.61	11.61	0.57	11.61	0.57
Road 68	0.42	0.12	0.12	0.12	0.12
M - P	0.00	0.00	0.43	0.00	0.43
GPR-14	0.00	0.00	0.13	0.00	0.13
GPR-15	0.00	0.00	0.17	0.00	0.17
GPR-16	0.00	0.00	0.13	0.00	0.13
Grand Total	12.04	11.74	1.12	11.74	1.12

M – NFS road to remain open to all motor vehicles

NM – NFS roads proposed to be closed to all motorized vehicle uses

SP – roads open for periodic administrative use or by written authorization

M-P – unauthorized route proposed to be added to NFS road and open to all vehicles

GPR – Glenwood Proposed Route

Alternatives B, C and F have the largest impact to soils with moderate and high erosion potential and unsuited and unsatisfactory soil condition. Alternatives D and G have the least impact to soils with the above mentioned ratings.

Each of the alternatives was analyzed to determine if there is potential for a motorized route system on the Gila National Forest to impact the Lower San Francisco River Wilderness Study Area (WSA) relative to water quality and riparian values.

The discussion above regarding impacts to the soil resource within the Hell Hole WSA/IRA also applies to the Lower San Francisco WSA/IRA. Also see the soils section in the FEIS regarding impacts related to the soils resource forest wide.

Water Quality:

There are currently 40 motorized route crossings within the WSA. Alternative E provides the most reduction (-100 percent) of these motorized crossings by eliminating all motorized access down to the San Francisco River WSA. Alternatives D and G are close behind with a reduction of 98 percent of motorized crossings. The only remaining crossing in these two alternatives would be on Big Dry Creek at its confluence with the San Francisco River. Alternatives C and F do not eliminate any of the existing motorized crossings. Alternatives E, D, and G provide the most opportunity to reduce direct impacts to water quality as mobilization of stream bottom sediments from motorized traffic would be greatly limited with the reduction and/or elimination of stream crossings. In addition, once recovery of riparian vegetation occurs at the ingress and egress point of the crossings, this vegetation can serve as a filter for sediment movement that may occur during precipitation events along current route/crossing paths.

A small reach (0.23 miles) of the San Francisco River within the WSA is documented on New Mexico's 2012-2014 303(d) list of impaired waterbodies. Alternative E would eliminate all motorized routes within 300 feet of this listed reach. The remaining alternatives (C, D, F, and G) would eliminate 88 percent (0.20 miles) of the motorized routes within 300 feet of this listed reach. All five alternatives provide a major reduction in the length of motorized routes adjacent to the impaired reach of the San Francisco River within the WSA. This reduction in routes reduces the risk for potential road-related sediment to enter this reach of the river.

There are currently 9.95 miles of perennial, intermittent, and ephemeral waterbodies within the Lower San Francisco River WSA. In review of motorized routes within 300 feet of these water bodies, Alternative E eliminates all motorized routes within the 300 feet. Alternatives D and G are close behind with a reduction of 93 percent of motorized routes within the 300 feet. Alternatives C and F reduce a minor amount (-2 percent) of motorized routes within the 300 foot width. Alternatives E, D, and G provide the most opportunity to reduce the risk for potential road-related sediment to enter into the drainage network. Hydrologic impacts would not be immediately eliminated, but would rather be dependent on natural recovery and successful revegetation of the current route paths.

Riparian Areas:

There are currently 11 acres associated with motorized routes within riparian areas located in the Lower San Francisco River WSA. Alternative E eliminates motorized routes within the WSA, thus providing a 100 percent reduction of acres associated with these routes. Alternatives D and G are close behind with a reduction of 91 percent of acres associated with motorized routes. Alternatives C and F reduce a minor amount (-3 percent) of acres associated with motorized routes within riparian areas. Alternatives E, D, and G provide the greatest opportunity to reduce the risk of negative impacts to riparian areas from motorized routes, thus increasing the opportunity for riparian habitat restoration. The wet nature of riparian areas provides an increased level of resiliency to irreversible impacts, and often increases the opportunity for recovery. Disturbed riparian habitat in the San Francisco River WSA may recover to a more natural state in a shorter period of time than a disturbed site in a drier, upland location.

Summary:

Overall, Alternative E, D, and G greatly reduce the potential risk of impacts to water quality and riparian areas within the Lower San Francisco River WSA, as motorized access would either be eliminated in its entirety (Alternative E) within the WSA, or limited to Dry Creek and small spur roads at the confluence

of Big Dry Creek and the San Francisco River (Alternatives D and G). Alternatives C and F provide little to no reduction in risk of potential impacts to water quality and riparian areas, as motorized access would continue down Big Dry Creek and along the San Francisco River for over eight miles within the WSA.

The following tables (Table 24 through Table 27) provide further information related to motorized routes within the Lower San Francisco River WSA and potential impacts to water quality and riparian area.

Table 24. Lower San Francisco River WSA/IRA impaired waterbody miles within 300-foot buffer of open, motorized routes (acres by alternative)

Impaired Water bodies within 300 Feet of Motorized Route	Alt B - No Action (acres)	Alt C (acres)	Alt D (acres)	Alt E (acres)	Alt F (acres)	Alt G (acres)
San Francisco River (Dry Creek to Whitewater Creek)	0.23	0.03	0.03	0.00	0.03	0.03
Grand Total	0.23	0.03	0.03	0.00	0.03	0.03
Difference within Impaired Waterbodies		-0.20	-0.20	-0.23	-0.20	-0.20
Change in Percentages		-88%	-88%	-100%	-88%	-88%

Table 25. Lower San Francisco River WSA/IRA motorized stream crossings (acres by alternative)

Motorized Route Stream Crossings	Alt B - No Action (acres)	Alt C (acres)	Alt D (acres)	Alt E (acres)	Alt F (acres)	Alt G (acres)
Water Body	40	40	1	0	40	1
Big Dry Cr.	1	1	1	0	1	1
San Francisco River	33	33	0	0	33	0
Unnamed	6	6	0	0	6	0
Grand Total	40	40	1	0	40	1
Differences in Stream Crossings		0	-39	-40	0	-39
Differences in Percentages		0%	-98%	-100%	0%	-98%

Table 26. Lower San Francisco River WSA/IRA stream miles within 300 feet of open, motorized routes (acres by alternative)

Waterbodies	Alt B- No Action (acres)	Alt C (acres)	Alt D (acres)	Alt E (acres)	Alt F (acres)	Alt G (acres)
Perennial	9.05	8.85	0.51	0.00	8.85	0.51
Mule Creek	0.06	0.06	0.00	0.00	0.06	0.00
San Francisco River	8.66	8.46	0.51	0.00	8.46	0.51
Unnamed	0.33	0.33	0.00	0.00	0.33	0.00
Intermittent	0.11	0.11	0.11	0.00	0.11	0.11
Big Dry Creek	0.11	0.11	0.11	0.00	0.11	0.11
Ephemeral	0.79	0.79	0.11	0.00	0.79	0.11
Unnamed	0.79	0.79	0.11	0.00	0.79	0.11
Grand Total	9.95	9.75	0.73	0.00	9.75	0.73
Differences in Routes		-0.20	-9.22	-9.95	-0.20	-9.22
Differences in Percentages		-2%	-93%	-100%	-2%	-93%

Table 27. Lower San Francisco River WSA/IRA acres of motorized routes within riparian areas (acres by alternative)

Habitat Type and Route Designation	Alt B – No Action (acres)	Alt C (acres)	Alt D (acres)	Alt E (acres)	Alt F (acres)	Alt G (acres)
<i>Sycamore/Fremont Cottonwood</i>	11.06	10.76	0.99	0.00	10.76	0.99
Motorized	11.06	10.76	0.67	0.00	10.76	0.67
Unauthorized route proposed to be motorized	0.00	0.00	0.32	0.00	0.00	0.32
Grand Total	11.06	10.76	0.99	0.00	10.76	0.99
Differences in Routes		-0.30	-10.07	-11.06	-0.30	-10.07
Differences in Percentages		-3%	-91%	-100%	-3%	-91%

Aquatic Resources - Each of the alternatives was analyzed to determine if there is potential for a motorized route system on the Gila National Forest to impact the San Francisco River Wilderness Study Area (WSA) and associated IRA relative to aquatic values.

Aquatic Resources:

The San Francisco River within the Lower San Francisco River Wilderness Study Area (WSA) is designated critical habitat for the loach minnow and spokedace. Currently, the native fishery within this reach of stream has been severely degraded due to the dominance of nonnative fish in the stream (J. Monzingo pers. obs). Spikedace historically occurred in this reach of stream but were extirpated by around 1950. Loach minnow have not been detected in this reach recently. However, rigorous, systematic surveys have not been completed along this reach of river since Anderson and Turner (1977) documented loach minnow during surveys beginning near the confluence of Big Dry Creek to downstream of the New Mexico and Arizona state line. Other native fishes that occurred or occur in the WSA include longfin dace, Sonora sucker, desert sucker, and speckled dace, and Gila chub. Historically, roundtail or headwater chub and Gila topminnow also occurred.

There are currently 37 motorized route crossings within loach minnow and spokedace critical habitat in the WSA. All currently motorized stream crossing located within loach minnow and spokedace designated critical habitat would be non-motorized in Alternatives D, E, and G. All currently motorized stream crossings in loach minnow and spokedace designated critical habitat would remain motorized in Alternatives C and F. Alternatives D, E, and G provide the most opportunity to reduce direct impacts to water quality, riparian plants, and habitat as mobilization and downstream transport of stream bottom sediments and physical disturbance of habitat, from motorized traffic, would be reduced as the number of stream crossings decrease. In addition, once recovery of riparian vegetation occurs at the ingress and egress point of the crossings, this vegetation can serve as a filter and reduce sediment movement into the stream.

There are currently 8.19 miles of motorized route located within loach minnow and spokedace critical habitat within the San Francisco River WSA. Alternative E eliminates all motorized routes within the 300 feet of designated critical habitat and presents the least relative risk to aquatic resources. Alternatives D and G include 0.66 miles of motorized routes within loach minnow and spokedace critical habitat. When compared to Alternative B, Alternatives C and F only slightly reduce the miles of motorized routes located within loach minnow and spokedace critical habitat. Alternatives E, D, and G provide the most opportunity to reduce the risk for potential road-related sediment to enter into the drainage network. Hydrologic impacts would not be immediately eliminated, but would rather be dependent on natural recovery and successful re-vegetation of the current route paths. Table 28 displays the miles of motorized

routes and number of stream crossings that are within designated critical habitat for the loach minnow and spikedace within the San Francisco River WSA.

Summary:

Overall, Alternative D, E, and G greatly reduce the potential risk of direct and indirect impacts to aquatic resources within the San Francisco River WSA, as motorized access would either be eliminated in its entirety (Alternative E) within the WSA, or limited to Dry Creek and small spur roads at the confluence of Big Dry Creek and the San Francisco River (Alternatives D and G). Alternatives C and F provide little to no reduction in risk of direct and indirect impacts to aquatic resources, as motorized access would continue down Big Dry Creek and along the San Francisco River for over eight miles and there would continue to be 40 stream crossings of which 37 are located in designated critical habitat for loach minnow and spikedace.

Table 28. Miles of motorized routes and number of motorized stream crossings within loach minnow and spikedace critical habitat in the Lower San Francisco River WSA and IRA by alternative

Potential Risk to Aquatic Resource	Alt B – No Action	Alt C	Alt D	Alt E	Alt F	Alt G
Miles of motorized route within loach minnow and spikedace critical habitat	8.19	7.99	0.66	0.0	7.99	0.66
Number of stream crossings within loach minnow and spikedace critical habitat	37	37	0	0	37	0

Sources of Public Drinking Water/ NA - No Municipal Watersheds located within the Lower San Francisco WSA or IRA.

Diversity of Plant and Animal Communities:

Habitat for TES and Species Dependent upon Large Undisturbed Areas of Land

The flow regimes of the San Francisco are primarily unrestricted by major impoundments or diversions; therefore, channel configurations are widely variable and the vegetation communities are typically represented by healthy riparian communities. Within this analysis area the primary vegetation type has been classified as lower riparian vegetation. A very small amount of piñon-juniper/shrub oak woodland habitat also occurs on the terraces within the canyon bottom.

Wide ranging, federally listed and Regional Forester sensitive species and species groups/focal groups that are currently being affected include:

- Large Ungulates – primarily, deer but this area may occasionally be used by elk and big horn sheep. Deer and elk are wide ranging species and big horn sheep are on the Regional Forester’s sensitive species list.
- Wide Ranging Carnivores - including bears, mountain lions, and potentially wolves (federally listed as threatened) on occasion.
- Small Mammals – Hooded skunk, Botta’s pocket gopher, White-nosed coati, Western red bat, and Arizona gray squirrel are all on the Regional Forester’s sensitive species list.
- Amphibians and Reptiles – Arizona toad, and narrow-headed gartersnake are designated sensitive species. The narrow-headed gartersnake has also recently been proposed for federal listing.

- Raptorial Birds – Northern Goshawk, Peregrine Falcon, Bald Eagle, and Golden Eagle (these species may occasionally forage in the area, but no known roost or nesting areas occur). The peregrine and bald eagle are both designated sensitive species and wide ranging. The golden eagle is a wide ranging species.
- Riparian Birds – Northern Gray Hawk, Western Yellow-billed Cuckoo, Arizona Bell's Vireo, Abert's Towhee, Gila Woodpecker, Common Ground Dove, and Black Hawk are all designated sensitive species.
- Woodland Birds – Plains Titmouse, and Gray Vireo are designated sensitive species.
- Game Birds – Wild Turkey is a wide ranging species.

See Wildlife Specialists Report and Biological Evaluation for description of motorized route effects to species groups/focal groups listed above.

Summary:

Overall, Alternatives D, E, and G greatly reduce the potential risk of direct and indirect impacts to species and species groups identified above within the San Francisco River WSA, as motorized access would either be eliminated in its entirety (Alternative E) within the WSA, or limited to Dry Creek and small spur roads at the confluence of Big Dry Creek and the San Francisco River (Alternatives D and G).

Alternatives C and F provide little to no reduction in risk of direct and indirect impacts to the species identified above, as motorized access would continue down Big Dry Creek and along the San Francisco River for over 8 miles and there would continue to be 37 stream crossings along this section of the San Francisco River.

Table 29. Lower San Francisco WSA/IRA wildlife habitat route miles by alternative*

Wildlife Habitat Route	Alt B (miles)	Alt C (miles)	Alt D (miles)	Alt E (miles)	Alt F (miles)	Alt G (miles)
Low Elevation Riparian Habitat	7.60	7.40	0.68	0.00	7.40	0.68
01-Open Existing ML 2 - ML 5	7.60	7.40	0.46	0.00	7.40	0.46
4223 L	7.31	7.31	0.37	0.00	7.31	0.37
68	0.29	0.09	0.09	0.00	0.09	0.09
04-Add Unauthorized Route	0.00	0.00	0.22	0.00	0.00	0.22
GPR-14	0.00	0.00	0.09	0.00	0.00	0.09
GPR-15	0.00	0.00	0.12	0.00	0.00	0.12
GPR-16	0.00	0.00	0.02	0.00	0.00	0.02
Pinion Juniper/Shrub Oak Woodland Habitat	0.67	0.67	0.09	0.00	0.67	0.09
01-Open Existing ML 2 - ML 5	0.67	0.67	0.02	0.00	0.67	0.02
4223 L	0.67	0.67	0.02	0.00	0.67	0.02
04-Add Unauthorized Route	0.00	0.00	0.07	0.00	0.00	0.07
GPR-16	0.00	0.00	0.07	0.00	0.00	0.07
Grand Total	8.27	8.07	0.77	0.00	8.07	0.77

*Route miles by Management Indicator Species (MIS) habitat

Table 30. Acres of affected lower elevation riparian type habitat by alternative

Habitat	Alt B (acres)	Alt C (acres)	Alt D (acres)	Alt E (acres)	Alt F (acres)	Alt G (acres)
Low Elevation Riparian Habitat Acres	341 ac.	329.5	24	0.00	329.5	24

Invasive Plant Species within the Lower San Francisco WSA

Invasive Aquatic Species in the watershed is discussed in the Fisheries and Wildlife Specialist's Report.

The invasive plant species of concern in the Lower San Francisco watershed is Tamarix (spp.) or Salt cedar. Salt cedar is listed on the New Mexico State Noxious Weed List as Class C, meaning limited to portions of the state and managed at the local level. This plant is a perennial, deciduous small shrub or tree that can grow up to 25 ft. tall. It is commonly found in disturbed or undisturbed sites along streams, springs, flood plains, drainages, and irrigation ditches. Rapid colonization and expansions most commonly occurs with flood events or water inundation.

Known infestations of Tamarix (Salt cedar) are scattered through-out the San Francisco River corridor from the confluence of Whitewater Creek downstream to the border of Arizona/New Mexico. These infestations are mostly individual small "seedling-like" trees. There are two known areas of tamarix that consist of approximately 1/10th acre and estimated at 100 stems, located along the corridor below the confluence of Mule Creek. (Personal communication with Kendall Brown, Range Staff, Glenwood Ranger District, 2013).

Direct/Indirect Effects - Invasive Plant Species within the San Francisco WSA

Alternative B leaves the San Francisco River above Mule Creek and also Big Dry Creek open to motorized vehicles. Stream crossings are not restricted. Although motorized travel does not directly affect the introduction, establishment and spread of tamarix, motorized travel in riparian corridors could alter native habitat through disturbance of vegetation, compaction, and streambank alteration along the corridor and at river crossings. This could increase the opportunity for invasive species establishment as compared to other alternatives by reducing vegetative cover that may hold streambanks and floodplains in place in flood events. Alternative C also allows motorized travel for camping along the San Francisco River from Hwy 180 to Mule Creek creating basically the same effects as Alternative B.

Alternatives D and G do not allow motorized travel along the San Francisco River nor allow any river crossings, therefore decreasing the opportunity for habitat alteration and invasive species introduction due to disturbance factors as described above when compared to Alternatives B and C. However, these alternatives (D and G) would provide increased opportunities for invasive species when compared to Alternative E which closes the entire river to any motorized travel. Effects of Alternative F to invasive species would be similar to those of Alternative C as this alternative also allows for motorized travel from Hwy 180 to Mule Creek.

In summary, Alternative E provides the least opportunities for invasive species and Alternatives B, C, and F would provide for the most opportunity for invasive species due to motorized travel. In Alternatives D and G opportunities for invasive species introduction, establishment, and spread due to motorized travel falls in between Alternative E and B or C.

There are three allotments that border the Lower San Francisco River. 1) Pleasanton/Lightning Mesa, 2) Potholes, 3) Harden Cienega. Livestock grazing is not permitted within the Lower San Francisco River corridor as described in the Grazing Allotment Instructions. Access is controlled either by fencing or topography. Compliance monitoring is conducted to assure cattle are not accessing the San Francisco River.

Primitive, Semi-Primitive Non-Motorized and Semi-Primitive Motorized Classes of Dispersed Recreation

Alternative B with the

The following discussion of effects of the Action Alternatives is based on the data contained in Appendix B Table IRA A1 through Table IRA A6 of this document.

Of the Action Alternatives, Alternative C provides the most opportunities for Semi-Primitive Motorized recreation with the least opportunities for Primitive and Semi Primitive Non-motorized recreation activities.

Alternative D benefits visitors that currently utilize these routes to access the River with a motorized vehicle.

Alternative E provides the most solitude or primitive unconfined recreational opportunities in the Lower San Francisco WSA. This alternative would have the most effect on visitors who currently access the River on routes that are currently open to motorized travel.

In Alternative F, Hunters accustomed to MBGR for deer, bear, mountain lion, javalina, and pronghorn could be dissatisfied at the loss of opportunity within the Lower San Francisco WSA.

This alternative benefits visitors that currently utilize these routes. There is the potential for user dissatisfaction at the loss of motorized opportunity on the roads proposed for closure. There is a potential for hunters who prefer to retrieve game using motorized vehicles to be dissatisfied at loss of opportunity within the Lower San Francisco WSA. Hunting related ATV activities within the WSA associated with MDC and MBGR would be the same as those opportunities provided for other ATV recreationists within WSA.

Reference Landscapes – No Research Natural Areas located within the Lower San Francisco River WSA or IRA.

Natural appearing landscapes with high scenic quality

The Lower San Francisco River is well known for its' scenic beauty. Visual Quality could be improved in all Action Alternatives due to the proposed prohibition on cross-country travel and limiting motorized use to designated routes within the WSA. Designation of routes would reduce the possibility of the creation of new unauthorized routes.

Traditional Cultural Properties

While no TCPs or sacred sites were identified as being affected by the Travel Management Project through consultation within the Lower San Francisco WSA and associated IRA, there is a chance that not all TCPs or sacred sites are known to the Gila NF.

Alternative B provides the maximum potential of motorized access to forest service lands through motorized cross-country travel. Therefore, Alternative B has the highest relative risk of effects to any potential TCPs or sacred site of all Alternatives.

Effects to potential TCPs and sacred sites may include, but are not limited to, unauthorized routes that will be maintained as part of the FS Road System bisecting the property and the introduction of noise to traditional gathering areas or during other traditional activities. Beneficial effects would be the same as seen in the Hell Hole WSA.

While no unauthorized routes that will be maintained as part of the FS Road System are proposed for Alternative C, this action alternative proposes the most acreage for MDC and MBGR corridors of all Action Alternatives. It has the least beneficial effects for potential TCPs and sacred sites. Outside of Alternative B, Alternative C provides the highest relative risk of direct and indirect effects to potential sacred sites and TCPs.

Alternative D and Alternative G proposes the same number of acres for MDC and MBGR corridors. Alternatives D and G provide less area for these activities than Alternatives B, C, and F, but more than Alternative E. Alternative D and G are the only alternatives that propose unauthorized routes that will be maintained as either part of the FS Road System. However, they still propose less area for motorized use than Alternatives B, C, and F. Alternative D and G also propose the same number of route closures. These alternatives provide the second most beneficial effects to potential TCPs and sacred sites. Alternative D, along with Alternative G, provides the second least relative risk of direct and indirect effects to potential TCPs and sacred sites of all Action Alternatives.

Alternative E proposes no new routes, MDC or MBGR corridors within the Lower San Francisco WSA/IRA. This alternative provides the most beneficial effects to potential TCPs and sacred sites. Changes presented in Alternative E result in the least relative risk of direct and indirect effects to potential sacred sites and TCPs.

Alternative F proposes more MDC and MBGR corridors acreage than Alternatives D, G, and E, but less than Alternative B and C. No new routes are proposed in Alternative F. Alternative F provides less beneficial effects to potential TCPs and sacred sites than Alternative D, E, and G, but more than Alternative B and C. Changes presented in Alternative F result in less relative risk of direct and indirect effects to potential sacred sites and TCPs when compared to Alternative B and C, but more risk when compared to D, G, and E.

Cumulative Effects within WSAs

The cumulative effects analysis evaluates past, present, and reasonably foreseeable actions on roadless characteristics and wilderness character in WSAs considering those activities that have influenced motorized or non-motorized travel within WSAs for the next decade.

The cumulative effects analysis area for the 2 Wilderness Study Areas, Hell Hole, and Lower San Francisco WSAs includes the lands within the WSA boundaries. It also includes adjacent lands beyond the WSA boundary; lands within the Lower San Francisco and Hell Hole IRAs; lands to the west located on the Apache-Sitgreaves National Forests including the eligible Wild & Scenic River corridor of the San Francisco River and lands within the Hell Hole and Lower San Francisco IRAs; and lands to the south of the Hell Hole WSA located within the Apache Box WSA managed by the Las Cruces Field Office of the Bureau of Land Management.

Past Actions

Access to WSAs has been developed over time from past Native-American use, mining, military travel, timber harvest, road construction, and trail construction and reconstruction activities. There are 10.75 miles of road located within the Hell Hole and 8.28 miles of road located within the Lower San Francisco River WSA.

Since the implementation of the Forest Plan in 1986, existing roads on the boundaries of and within WSAs have been routinely maintained. There are no NFS system trails located within either WSA.

Segments of the San Francisco River on the Gila National Forest were proposed during the eligibility planning process for Wild & Scenic Rivers and not included in the final eligibility findings.

The San Francisco River and Coal Creek are included in the eligibility findings for River segments located on the Apache-Sitgreaves National Forest. These findings identify a segment of the San Francisco River eligible under the classification of “Wild” and a segment of the river eligible under the classification of “Recreational.” A segment of Coal Creek is identified as eligible under the classification of “Wild” and a segment as eligible under the classification of “Recreational.” The “Recreational” segment of Coal Creek flows along the Arizona New Mexico border and flows on and off the Gila National Forest. The Apache-Sitgreaves National Forest administers the Coal Creek eligible W&S River.

None of the Action Alternative propose any new road or trail construction within either WSAs or associated IRAs. The combination of changes to the motorized route system results in a net reduction of road mileages and areas available for MDC and MBGR within WSAs and associated IRAs. The proposed changes to motorized access should not affect the eligible W&S River segments of the San Francisco River and Coal creek located on the Apache Sitgreaves NF.

Ongoing and Future Foreseeable Actions

In June 2009, the Apache-Sitgreaves National Forests conducted wilderness evaluation reports for the Hell Hole and Gila and Apache-Sitgreaves NFs portions of the Blue/San Francisco potential wilderness areas (USDA Forest Service 2009b and 2009c). These are being considered in Apache-Sitgreaves forest plan revision process as to wilderness area planning.

Road maintenance, as well as weed treatment, occurs along the transportation system located within the Gila National Forest WSAs. Grazing and Outfitter and Guide permittees utilize the road transportation system to access the WSAs on system roads for their operations. This road system is also used for firefighting operations.

Treating noxious weeds would allow native vegetation to reestablish and greatly improve many roadless characteristics, such as the soil resource, diversity of plant and animal communities, and their associated habitat, and the naturalness associated with the area’s landscape character and integrity. It also limits the expansion of weed infestations throughout non-infested areas within the WSAs.

Short term effects to recreational opportunities in Primitive and Semi-Primitive environments may occur if recreationists expecting solitude encounter weed control crews working in the WSAs. Apparent naturalness may also be affected in the short term where grubbing, pulling, and/or mechanical treatments are obvious.

Weed treatment, vegetation projects, ongoing trail maintenance and reconstruction, and fire management activities all have the potential for cumulative effects on the areas’ roadless characteristics. In most cases, however, these projects trend towards improving Roadless Area character.

Future vegetation projects may include continued weed treatment of Tamarisk/Salt Cedar. Short term impacts to opportunities for quiet, backcountry recreation could be expected where recreationists encounter crews working in the field treating Salt Cedar.

The Tucson Electric Power (TEP) powerline right- of-way (ROW) located in the Lower San Francisco WSA would continue in all alternatives. The ROW is periodically maintained per the terms and conditions of the permit. This would include helicopter access, use of roads, and vegetation fuel reduction treatments within the corridor all of which could be audible or visible to the recreating public.

All Action Alternatives have the potential for the same cumulative effects related to Primitive, Semi-Primitive-Motorized and Semi Primitive-Non-Motorized recreation opportunities and visitor satisfaction within WSAs as listed above for IRAs.

Irreversible or Irretrievable Commitments

All of the Action Alternatives may or may not result in the irreversible or irretrievable commitment of some of the forest's soil resources within WSAs. See Watershed and Soils Specialist Report (USDA Forest Service 2013d).

This decision can be revised, changed, or removed through the travel analysis process or by special order in the event of sudden, unforeseen, or emergency situations. The Motor Vehicle Use Map (MVUM) will be updated on an annual basis.

Effects of Forest Plan Amendments

Amendments 1 thru 6 to the forest plan may have effects because they propose changes in the management of specific areas of the forest. These effects, like those from the proposed action and alternatives, are disclosed as part of the effects analysis above.

Amendment 7 is administrative in nature and not expected to have effects as a result of this project or future projects. This proposed amendment, for the most part, simply updates and provides consistent direction for application of the Forest Plan with the Travel Management Rule

References Cited

- Anderson, R. and P. Turner. 1977. Stream Survey of the San Francisco River. Unpublished Report to NM Department of Game and Fish. Santa Fe, NM. Pp. 34.
- BISON-M. 2010b. Northern Goshawk (*Accipiter gentilis atricapillus* and *A.g. apache*). This reference information came from the BISON-M (Biota Information System of NM) database. The information was derived directly from data in this species account. See other references in this account for more information. Available at: <http://www.bison-m.org/booklet.aspx?id=041320>.
- Call, M.W. 1979. Habitat Management Guides for Birds Of Prey. Tech. Note 338. U.S. Dep. Inter., Bur. Land Manage., Denver, Colo.
- Gaines, W.L.; P.H. Singleton; and R.C. Ross. 2003. Assessing the cumulative effects of linear recreation routes on wildlife habitats on the Okanogan and Wenatchee National Forests. Gen. Tech. Rep. PNW-GTR-586. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, 79 pp.
- Grubb, T.G.; Pater, L.L.; and Delaney, D.K. 1998. Logging Truck Noise Near Nesting Northern Goshawks. Forest Service Rocky Mountain Research Station. Research Note RMRS-RN-3.
- Jones, S. 1979. The Accipiters – Goshawk, Cooper’s Hawk, Sharp-shinned Hawk. U.S. Bureau of Land Management Rep. No. 335. Denver. 51 pp.
- Landres, Peter; Hennessy, Mary Beth; Schlenker, Kimberly; Cole, David N; and Steve Boucher. 2008. Applying the Concept of Wilderness Character to National Forest Monitoring, and Management. Gen. Tech. Rep. RMRS-GTR-217WWW. Fort Collins, CO; US Department of Agriculture, Forest Service, Rocky Mountain Research Station. 45 pp.
- New Mexico Wilderness Act. 1980. Public Law 96-550
- Reynolds, R.T., R.T. Graham, M.H. Reiser, R.L. Bassett, P., L. Kennedy, D.A. Boyce, Jr., G. Goodwin, R. Smith, and E.L. Fisher. 1992. Management recommendations for the northern goshawk in the southwestern United States. USDA Forest Service General Technical Report RM-217:90 pp.
- USDA Forest Service. 1986. Gila National Forest Plan. USDA Forest Service, Southwestern Region, September 1986.
- USDA Forest Service. 2009b. Apache-Sitgreaves National Forest Draft Wilderness Evaluation Report, Hells Hole Potential Wilderness PW-03-01-054.
- USDA Forest Service. 2009c. Apache-Sitgreaves National Forest Draft Wilderness Evaluation Report, Gila Portion, West Blue/San Francisco Potential Wilderness Report PW-03-052.
- USDA Forest Service. 2013d. Watershed and soils specialist report. Unpublished report available at the Gila National Forest, Silver City, NM.
- USDA Forest Service. 2013g. Wildlife specialist report. Unpublished report available at the Gila National Forest, Silver City, NM.
- Wilderness Act. 1964. PL 88-577 (16 U.S.C. 1131-1136).

Wisdom, M.; R.S. Holthausen, B.C. Wales, C.D. Hargis, V.A. Saab, D.C. Lee, W.J. Hann, T.D. Rich, M.M. Rowland, W. Murphy, and M.R. Eames. 2000. Source habitats for terrestrial vertebrates of focus in the Interior Columbia Basin: Broad-scale trends and management implications, Volume 2 – Group level results. USDA, Forest Service, Pacific Northwest Research Station, General Technical Report PNW-GTR-485. pp. 157-434.

Appendix A – Inventoried Roadless Area Information

[Table IRA A1 - Inventoried Roadless Area Acreages](#)

[Table IRA A2 – Motorized Road Route Designation by Definition](#)

[Table IRA A3 – Miles of Road Opportunities](#)

[Table IRA A4 – Miles of Road for Periodic Administrative use or by written authorization](#)

[Table IRA A5- Miles of Unauthorized Motorized Routes to Maintain as Roads](#)

[Table IRA A6 - Miles and Acres of Corridors for Motorized Dispersed Camping](#)

[Table IRA A6 - Miles and Acres of Corridors for Motorized Dispersed Camping \(Continued\)](#)

[Table IRA A7 – Miles and Acres of Corridors for Motorized Big Game Retrieval](#)

[Table IRA A8 – Motorized Trail Route Designation by Definition](#)

[Table IRA A9 - Miles of Semi-Primitive Motorized Trail Opportunities](#)

[Table IRA A10 – Miles of Semi Primitive Non-Motorized Trail Opportunities](#)

[Table IRA A 11 Miles of Maintenance Level 1 \(ML-1\) Closed Road Other Non-Motorized Travel Opportunities](#)

[Table IRA A12 - Miles Unauthorized Motorized Route Additions to Trails](#)

[Table IRA A13 – Continental Divide National Scenic Trail \(CDNST\) Motorized Route Indicators](#)

Subset - CDNST routes located within an IRA with proposed changes with potential to affect Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized Classes of Dispersed Recreation

[Table IRA A14 – Forest Activity Tracking System \(FACTS\) Past Activities within IRAs](#)

Table IRA A1. Inventoried roadless area acreage

IRA	Official Acres (Albers)	NAD 83 UTM Acres Zone 12 (GIS)	Acres Difference
1978 Administratively Endorsed Wilderness Proposal	4,286	4,287	2
Apache Mountain	17,506	17,513	8
Aspen Mountain	23,783	23,758	2
Brushy Mountain	7,199	7,210	11
Brushy Springs	5,735	5,737	2
Canyon Creek	9,824	9,831	7
Contiguous to Black & Aldo Leopold Wilderness	111,811	112,027	146
Contiguous to Blue Range Wilderness	1,980	1,980	0
Contiguous to Gila Wilderness and Primitive Area	79,048	79,102	54
Devils Creek	89,915	89,937	22
Dry Creek	26,719	26,757	38
Eagle Peak	34,016	34,029	13
Elk Mountain	6,550	6,554	4
Gila Box	23,759	23,770	11
Hell Hole	19,553	19,554	1
Largo	12,730	12,736	6
Lower San Francisco	26,459	26,462	3
Meadow Creek	34,167	34,200	34
Mother Hubbard	5,895	5,895	0
Nolan	13,050	13,051	1
Poverty Creek	8,770	8,782	88
Sawyers Peak	59,743	59,831	13
Stone Canyon	6,801	6,811	10
T Bar	6,823	6,827	4
Taylor Creek	16,639	16,655	16
The Hub	7,498	7,502	4
Wagon Tongue	11,411	11,417	6
Wahoo Mountain	23,121	23,154	32
TOTAL	733,836	734,384	548

Table IRA A2. Motorized road route designation by definition - inventoried roadless areas

Proposal Code	Description	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
M	NFS road to remain open to all motor vehicle types	362.1	293.0	195.4	154.1	224.1	220.7
M - SLV	Change vehicle type on open NFS roads to highway legal vehicles only	0.0	2.3	2.3	2.3	2.3	2.3
REOPEN - M	Re-open NFS closed or decommissioned (ML1) roads to all motor vehicle types	0.0	1.1	0.0	0.0	0.0	0.0
M - P	Unauthorized route proposed to be added to NFS roads and open to all vehicle types	0.0	0.3	0.4	0.0	0.0	0.3
SP	Change use of existing NFS roads to open for periodic administrative use or by written authorization only	0.0	23.2	40.9	42.4	41.5	38.3
REOPEN - SP	Re-open NFS closed or decommissioned (ML1) roads to open for periodic administrative use or by written authorization only	0.0	0.6	0.6	0.6	0.6	0.6
SP-P	Unauthorized route proposed to be added to NFS roads for periodic administrative use or by written authorization only	0.0	0.1	0.4	0.3	0.4	0.4
COUNTY	Road under County (Catron, Grant, Hidalgo, or Sierra) jurisdiction	8.0	8.0	8.0	8.0	8.0	8.0
SH - State Highway	Highway under State jurisdiction	2.5	2.5	2.5	2.5	2.5	2.5
Total Motorized Road Routes		372.7	331.1	250.6	210.2	279.4	273.1

Table IRA A3. Miles of road opportunities¹ by inventoried roadless area by alternative

Inventoried Roadless Area	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
1978 Administratively Endorsed Wilderness Proposal	0.7	0.6	0.6	0.6	0.6	0.6
Apache Mountain	19.4	14.6	13.4	13.4	13.4	13.4
Aspen Mountain	14.8	14.9	9.2	7.0	9.8	9.8
Brushy Mountain	1.5	1.5	0.7	0.7	1.4	1.4
Brushy Springs	11.7	11.7	8.2	7.5	8.2	8.2
Canyon Creek	7.8	7.0	5.4	0.0	6.3	6.3
Contiguous To Black & Aldo Leopold Wilderness	45.3	33.8	19.3	14.9	26.6	26.5
Contiguous To Blue Range Wilderness	3.7	3.7	1.8	1.8	1.9	2.6
Contiguous To Gila Wilderness & Primitive Area	59.2	54.9	36.1	29.9	39.5	39.5
Devils Creek	44.3	31.2	21.9	18.5	25.6	27.2
Dry Creek	6.7	5.2	1.9	1.2	4.0	4.0
Eagle Peak	4.5	4.5	4.4	4.0	4.4	4.4
Elk Mountain	3.6	3.6	2.7	0.0	3.0	3.0
Frisco Box	6.7	5.7	2.4	2.2	2.7	2.7
Gila Box	5.3	5.3	3.6	3.6	3.6	3.6
Hell Hole	10.9	5.8	2.4	4.1	2.1	4.4
Largo	7.7	7.7	7.7	7.7	7.7	7.7
Lower San Francisco	17.6	16.8	9.2	5.1	16.5	9.2
Meadow Creek	26.0	24.4	18.9	8.1	18.0	17.7
Mother Hubbard	1.9	1.9	0.0	0.0	0.0	0.0
Nolan	4.3	4.3	2.3	1.7	3.1	3.1
Poverty Creek	2.5	0.0	0.0	0.0	0.0	0.0
Sawyers Peak	14.6	11.9	6.1	4.8	6.5	6.6
Stone Canyon	8.5	0.7	0.0	0.0	0.0	0.0
T Bar	1.4	1.4	0.3	.3	.3	.3
Taylor Creek	15.9	15.9	15.3	15.3	15.3	15.3
The Hub	5.0	5.0	4.0	4.0	4.0	4.0
Wagon Tongue	5.0	5.0	3.1	2.7	4.6	4.6
Wahoo Mountain	15.9	8.3	7.8	7.8	7.9	7.9
TOTAL	372.7	307.3	208.8	167.0	237.0	233.9

¹ Road opportunities include the following:

M=NFS Road to remain open to all vehicle types; AQ=ROW=Acquired Right of Way (ROW); ASSERT= Asserting ROW; COUNTY; M-P=Unauthorized route proposed to be maintained as NFS road open to the public; M-SLV= Change vehicle type to open to highway legal vehicles only; REOPEN-M=Re-open NFS closed or decommissioned (ML-1) roads to all motor vehicle types, ROW=Existing ROW to NP, S=Change time of year on roads to be designated seasonally only, SH=State Highway, US Roads –

Table IRA A4. Miles of road for periodic administrative¹ use or by written authorization by inventoried roadless area and alternative

Inventoried Roadless Area	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
1978 Administratively Endorsed Wilderness Proposal	0.0	0.0	0.0	0.0	0.0	0.0
Apache Mountain	0.0	1.0	2.0	2.0	2.0	2.0
Aspen Mountain	0.0	0.0	0.0	0.0	0.0	0.0
Brushy Mountain	0.0	0.0	0.8	0.8	0.0	0.0
Brushy Springs	0.0	0.0	0.9	0.9	0.9	0.9
Canyon Creek	0.0	0.0	0.0	0.0	0.0	0.0
Contiguous To Black & Aldo Leopold Wilderness	0.0	4.4	6.0	9.4	5.2	5.3
Contiguous To Blue Range Wilderness	0.0	0.0	1.8	1.8	1.8	1.1
Contiguous To Gila Wilderness & Primitive Area	0.0	4.6	4.9	5.0	5.8	4.9
Devils Creek	0.0	7.6	14.8	13.8	14.8	14.8
Dry Creek	0.0	0.3	0.3	0.3	0.3	0.3
Eagle Peak	0.0	0.0	0.0	0.0	0.0	0.0
Elk Mountain	0.0	0.0	0.0	0.0	0.0	0.0
Frisco Box	0.0	0.0	1.0	1.0	1.0	1.0
Gila Box	0.0	0.1	0.1	0.1	0.1	0.1
Hell Hole	0.0	3.1	4.3	2.7	4.9	3.1
Largo	0.0	0.0	0.0	0.0	0.0	0.0
Lower San Francisco	0.0	0.6	0.6	0.6	0.6	0.6
Meadow Creek	0.0	0.5	0.9	0.9	0.5	0.5
Mother Hubbard	0.0	0.0	1.2	1.2	1.2	1.2
Nolan	0.0	0.0	0.6	0.6	0.6	0.6
Poverty Creek	0.0	1.7	1.7	1.7	1.7	1.7
Sawyers Peak	0.0	0.9	1.7	1.7	1.7	1.7
Stone Canyon	0.0	2.0	2.3	2.9	2.3	2.3
T Bar	0.0	0.0	0.0	0.0	0.0	0.0
Taylor Creek	0.0	0.0	0.2	0.2	0.2	0.2
The Hub	0.0	0.0	0.0	0.0	0.0	0.0
Wagon Tongue	0.0	0.0	0.0	0.0	0.0	0.0
Wahoo Mountain	0.0	0.3	0.3	0.2	0.3	0.3
TOTAL	0.0	27.1	46.1	47.5	45.6	42.5

¹ Roads for Periodic Administrative Use or by Written Authorization include the following:

REOPEN-SP= Reopen NFS or decommissioned (ML-1) for the above use; SP=Change use of existing NFS road for the above use, SP-ATV= Change use of existing NFS Trail to the above use for access by ATV only; SP-P=Unauthorized route proposed to be added to the NFS road system for the above use.

Table IRA A5. Miles of unauthorized motorized route to maintain as roads in inventoried roadless areas by alternative

Proposal Code	Proposal Description/Route	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Contiguous To Gila Wilderness and Primitive Area							
RE-OPEN - M	Re-open NFS closed or decommissioned (ML1) roads to all motor vehicle types						
	4077 P (Boundary)	0.0	1.10	0.00	0.00	0.00	0.00
	IRA Miles	0.0	1.10	0.00	0.00	0.00	0.00
Contiguous To Black and Aldo Leopold Wilderness							
M - P	Unauthorized route proposed to maintain as NFS roads and open to all vehicle types						
	WA2	0.00	0.00	0.05	0.00	0.00	0.00
	WA25	0.00	0.00	0.02	0.00	0.00	0.00
	WA26	0.00	0.00	0.02	0.00	0.00	0.00
	WA27	0.00	0.00	0.04	0.00	0.00	0.00
	IRA Miles	0.00	0.00	0.13	0.00	0.00	0.00
Lower San Francisco (also displayed in Wilderness Study Area)							
M - P	Unauthorized route proposed to maintain as NFS roads and open to all vehicle types						
	GPR-14	0.00	0.00	0.09	0.00	0.00	0.09
	GPR-15	0.00	0.00	0.12	0.00	0.00	0.12
	GPR-16	0.00	0.00	0.09	0.00	0.00	0.09
	IRA Miles	0.00	0.00	0.30	0.00	0.00	0.30
Poverty Creek							
SP - P	Unauthorized route proposed to maintain as NFS roads for periodic administrative use or by written authorization only						
	BR2	0.00	0.04	0.00	0.00	0.00	0.00
	IRA Miles	0.00	0.04	0.00	0.00	0.00	0.00
Stone Canyon							
M - P	Unauthorized route proposed to maintain as NFS roads and open to all vehicle types						
	BR6 (Boundary)	0.00	0.28	0.00	0.00	0.00	0.00
SP- P	Unauthorized route proposed to maintain as NFS roads for periodic administrative use or by written authorization only						
	BR6 (Boundary)	0.00	0.00	0.28	0.28	0.28	0.28
	IRA Miles	0.00	0.28	0.28	0.28	0.28	0.28
Wahoo Mountain							
SP - P	Unauthorized route proposed to maintain as NFS roads for periodic administrative use or by written authorization only						
	BR13	0.00	0.03	0.03	0.00	0.03	0.03
	BR15	0.00	0.08	0.08	0.00	0.08	0.08
	IRA Miles	0.00	0.10	0.10	0.00	0.10	0.10
Total Unauthorized Routes to maintain as road – Inventoried Roadless Areas		0.00	0.42	0.81	0.28	0.38	0.68
Total Re-Open Routes		0.00	1.10	0.00	0.00	0.00	0.00

Table IRA A6. Miles and acres of motorized dispersed camping corridor by inventoried roadless area

Inventoried Roadless Area and (Acres)	Alt B (miles)	Alt B (acres)	Alt C (miles)	Alt C (acres)	Alt D (miles)	Alt D (acres)	Alt E (miles)	Alt E (acres)	Alt F (miles)	Alt F (acres)	Alt G (miles)	Alt G (acres)
1978 Administratively Endorsed Wilderness Proposal (4,287)	N/A	4,203	0	0	0	0	0	0	0	0	0	0
Apache Mountain (17,513)	N/A	17,507	4.92	368	4.67	348	0	0	1.06	89	4.67	348
Aspen Mountain (23,785)	N/A	23,785	4.85	361	0.54	45	0	0	0.55	57	0.61	54
Brushy Mountain (7,210)	N/A	7,166	0.16	21	0.16	21	0	0	0.16	21	0.16	21
Brushy Springs (5,737)	N/A	5,718	0.05	10	0.05	10	0	0	0.05	10	0.05	10
Canyon Creek (9,831)	N/A	9,830	3.30	267	0.56	59	0	0	3.30	267	3.30	267
Contiguous to Black & Aldo Leopold Wilderness (112,027)	N/A	111,956	5.75	481	4.13	348	0	0	5.75	481	5.75	481
Contiguous to Blue Range Wilderness (1,980)	N/A	1,977	1.90	155	1.83	147	0	0	1.90	155	1.83	147
Contiguous to Gila Wilderness and Primitive Area (79,102)	N/A	78,480	14.87	1,163	14.21	1,111	0	0	14.87	1,163	14.87	1,163
Devils Creek (89,937)	N/A	89,806	5.05	375	1.13	97	0	0	5.05	375	1.13	97
Dry Creek (26,757)	N/A	26,724	0.00	1	0.00	1	0	0	0.00	1	0.00	1
Eagle Peak (34,029)	N/A	34,018	0.00	5	0.00	2	0	0	0.00	5	0.00	2
Elk Mountain (6,554)	N/A	6,554	0.58	47	0.00	0	0	0	0.58	47	0.58	47
Frisco Box (38,987)	N/A	38,977	1.52	145	0.47	60	0	0	0.56	73	0.56	73
Gila Box (23,770)	N/A	18,447	2.61	184	2.61	184	0	0	2.61	184	2.61	184
Hell Hole (19,554)	N/A	19,524	1.40	114	0.23	22	0	0	0.26	29	0.23	22
Largo (12,736)	N/A	12,734	7.71	560	7.71	560	0	0	7.71	560	7.71	560
Lower San Francisco (26,462)	N/A	23,028	13.94	1,027	2.59	207	0	0	6.18	467	2.59	207
Meadow Creek (34,200)	N/A	30,584	6.69	488	5.14	380	0	0	6.69	488	6.35	465
Mother Hubbard (5,895)	N/A	5,895	0.00	0	0.00	0	0	0	0.00	0	0.00	0
Nolan (13,051)	N/A	13,038	0.95	88	0.63	63	0	0	0.95	85	0.63	63
Poverty Creek (8,782)	N/A	8,759	0.00	0	0.00	0	0	0	0.00	0	0.00	0
Sawyers Peak (59,831)	N/A	59,780	3.36	302	3.36	302	0	0	3.36	302	3.36	302
Stone Canyon (6,811)	N/A	6,807	0.00	0	0.00	0	0	0	0.00	0	0.00	0
T Bar (6,827)	N/A	6,827	0.00	0	0.00	0	0	0	0.00	0	0.00	0
Taylor Creek (16,655)	N/A	16,621	5.17	392	5.20	397	0	0	5.17	384	5.17	384
The Hub (7,502)	N/A	4,939	0.52	40	0.52	40	0	0	0.52	40	0.52	40
Wagon Tongue (11,417)	N/A	11,415	0.00	3	0.00	0	0	0	0.00	3	0.00	0
Wahoo Mountain (23,154)	N/A	23,122	0.17	15	0.17	15	0	0	0.17	15	0.17	15
TOTAL (734,384)	N/A	718,219	85	6,615	56	4,420	0	0	67	5,303	63	4,954

Table IRA A7. Miles and acres of corridors for motorized access for big game retrieval by inventoried roadless area

Inventoried Roadless Area and (Acres)	Alt B (miles)	Alt B (acres)	Alt C (miles)	Alt C (acres)	Alt D (miles)	Alt D (acres)	Alt E (miles)	Alt E (acres)	Alt F (miles)	Alt F (acres)	Alt G (miles)	Alt G (acres)
1978 Administratively Endorsed Wilderness Proposal (4,287)	N/A	4,203	0.61	1,989	0.00	0	0	0	0.61	519	0.00	0
Apache Mountain (17,513)	N/A	17,507	14.60	15,266	4.67	348	0	0	13.38	8,870	4.67	348
Aspen Mountain (23,785)	N/A	23,785	14.86	15,310	0.54	45	0	0	9.80	9,079	0.61	54
Brushy Mountain (7,210)	N/A	7,166	1.46	6,175	0.16	21	0	0	1.43	2,744	0.16	21
Brushy Springs (5,737)	N/A	5,718	11.68	5,718	0.05	10	0	0	8.22	3,895	0.05	10
Canyon Creek (9,831)	N/A	9,830	6.99	9,640	0.56	59	0	0	6.34	6,207	3.30	267
Contiguous to Black & Aldo Leopold Wilderness (112,027)	N/A	111,956	33.76	65,336	4.13	348	0	0	26.64	30,315	5.75	481
Contiguous to Blue Range Wilderness (1,980)	N/A	1,977	3.70	1,977	1.83	147	0	0	1.90	1,752	1.83	147
Contiguous to Gila Wilderness and Primitive Area (79,102)	N/A	78,480	54.88	48,379	14.21	1,111	0	0	39.51	31,216	14.87	1,163
Devils Creek (89,937)	N/A	89,806	31.17	53,414	1.13	97	0	0	25.59	22,426	1.13	97
Dry Creek (26,757)	N/A	26,724	5.17	15,238	0.00	1	0	0	3.96	6,851	0.00	1
Eagle Peak (34,029)	N/A	34,018	4.48	15,461	0.00	2	0	0	4.44	5,904	0.00	2
Elk Mountain (6,554)	N/A	6,554	3.61	6,324	0.00	0	0	0	2.97	3,692	0.58	47
Frisco Box (38,987)	N/A	38,977	5.70	24,539	0.47	60	0	0	2.70	9,232	0.56	73
Gila Box (23,770)	N/A	18,447	5.26	8,581	2.61	184	0	0	3.58	1,222	2.61	184
Hell Hole (19,554)	N/A	19,524	5.77	9,776	0.23	22	0	0	2.13	3,819	0.23	22
Largo (12,736)	N/A	12,734	7.71	8,949	7.71	560	0	0	7.71	5,182	7.71	560
Lower San Francisco (26,462)	N/A	23,028	16.81	19,343	2.59	207	0	0	16.46	11,626	2.59	207
Meadow Creek (34,200)	N/A	30,584	24.38	25,293	5.14	380	0	0	18.00	11,709	6.35	465
Mother Hubbard (5,895)	N/A	5,895	1.92	3,603	0.00	0	0	0	0.00	603	0.00	0
Nolan (13,051)	N/A	13,038	4.35	11,755	0.63	63	0	0	3.08	5,175	0.63	63
Poverty Creek (8,782)	N/A	8,759	0.00	3,745	0.00	0	0	0	0.00	1,147	0.00	0
Sawyers Peak (59,831)	N/A	59,780	11.91	34,235	3.36	302	0	0	6.49	13,653	3.36	302
Stone Canyon (6,811)	N/A	6,807	0.73	2,931	0.00	0	0	0	0.00	0	0.00	0
T Bar (6,827)	N/A	6,827	1.43	6,789	0.00	0	0	0	0.28	3,493	0.00	0
Taylor Creek (16,655)	N/A	16,621	15.95	14,893	5.20	397	0	0	15.35	8,872	5.17	384
The Hub (7,502)	N/A	4,939	5.02	4,803	0.52	40	0	0	3.97	2,780	0.52	40
Wagon Tongue (11,417)	N/A	11,415	5.02	9,228	0.00	0	0	0	4.57	4,532	0.00	0
Wahoo Mountain (23,154)	N/A	23,122	8.34	13,137	0.17	15	0	0	7.90	5,841	0.17	15
TOTAL (734,384)	N/A	718,219	307.27	461,827	55.91	4,420	0	0	237.01	222,354	62.85	4,954

Table IRA A8. Motorized trail route designation by definition - inventoried roadless areas

Proposal Code	Description	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
ATV	Open NFS roads proposed to be converted to NFS trail for motorized vehicles < 50" in width	0.0	8.5	8.0	0.0	13.4	14.9
ATV - EX	Existing NFS trails designed and managed for motorized vehicles < 50" in width	4.5	4.5	0.1	0.0	4.5	4.5
ATV - P	Unauthorized route proposed to be added to NFS trails for motorized vehicles < 50" in width	0.0	1.6	0.4	0.0	0.9	0.9
CLOSED - ATV - P	Closed NFS road proposed to be converted to NFS trail for motorized vehicles < 50" in width	0.0	1.4	0.5	0.0	1.4	1.4
DECOMM - ATV - P	Decommissioned NFS road proposed to be converted to NFS trail for motorized vehicles < 50" in width	0.0	0.7	0.0	0.0	0.7	0.7
2WV - P	NFS trails or unauthorized routes proposed to be added as NFS motorized single-track trail (motorcycle)	0.0	35.7	0.0	0.0	0.0	0.0
SP - ATV	Change use of existing NFS Trail to open for periodic administrative use or by written authorization only for access by ATV only	0.0	3.2	4.3	4.3	3.2	3.2
Total Motorized Trail Routes		4.5	55.6	13.3	4.3	24.1	25.5

Table IRA A9. Miles of semi-primitive motorized trail opportunities within inventoried roadless areas

Inventoried Roadless Area	Alt B ATV¹	Alt C ATV	Alt D ATV	Alt E ATV	Alt F ATV	Alt G ATV
1978 Administratively Endorsed Wilderness Proposal	0.2	0.2	0.0	0.0	0.2	0.2
Aspen Mountain	2.9	2.9	0.0	0.0	2.9	2.9
Contiguous To Black and Aldo Leopold Wilderness	0.2	11.8	3.4	0.0	5.3	5.3
Contiguous To Gila Wilderness and Primitive Area	1.0	9.9	2.2	0.0	2.5	2.5
Devils Creek	0.0	4.9	2.7	0.0	0.9	2.3
Gila Box	0.0	1.9	0.0	0.0	1.2	1.2
Meadow Creek	0.0	12.0	0.6	0.0	3.8	3.8
Mother Hubbard	0.1	0.1	0.1	0.0	0.1	0.1
Sawyers Peak	0.0	8.6	0.0	0.0	4.0	4.0
Apache Mountain	0.0	0.0	0.0	0.0	0.0	0.0
Brushy Mountain	0.0	0.0	0.0	0.0	0.0	0.0
Brushy Springs	0.0	0.0	0.0	0.0	0.0	0.0
Canyon Creek	0.0	0.0	0.0	0.0	0.0	0.0
Contiguous To Blue Range Wilderness	0.0	0.0	0.0	0.0	0.0	0.0
Dry Creek	0.0	0.0	0.0	0.0	0.0	0.0
Eagle Peak	0.0	0.0	0.0	0.0	0.0	0.0
Elk Mountain	0.0	0.0	0.0	0.0	0.0	0.0
Frisco Box	0.0	0.0	0.0	0.0	0.0	0.0
Hell Hole	0.0	0.0	0.0	0.0	0.0	0.0
Largo	0.0	0.0	0.0	0.0	0.0	0.0
Lower San Francisco	0.0	0.0	0.0	0.0	0.0	0.0
Nolan	0.0	0.0	0.0	0.0	0.0	0.0
Poverty Creek	0.0	0.0	0.0	0.0	0.0	0.0
Stone Canyon	0.0	0.0	0.0	0.0	0.0	0.0
T Bar	0.0	0.0	0.0	0.0	0.0	0.0
Taylor Creek	0.0	0.0	0.0	0.0	0.0	0.0
The Hub	0.0	0.0	0.0	0.0	0.0	0.0
Wagon Tongue	0.0	0.0	0.0	0.0	0.0	0.0
Wahoo Mountain	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	4.5	52.4	9.0	0.0	20.9	22.3

¹ Miles of ATV Semi-Primitive Motorized Trail Opportunities include all of the categories defined in Table IRA A8

Table IRA A10. Semi-primitive non-motorized trail opportunities within inventoried roadless areas

Inventoried Roadless Area	Non-Motorized Hiker/Equestrian
1978 Administratively Endorsed Wilderness Proposal	1.1
Apache Mountain	1.7
Aspen Mountain	21.5
Contiguous To Black and Aldo Leopold Wilderness	46.6
Contiguous To Gila Wilderness and Primitive Area	44.4
Devils Creek	42.2
Dry Creek	14.5
Eagle Peak	9.0
Frisco Box	25.7
Gila Box	9.1
Lower San Francisco	0.7
Meadow Creek	24.2
Mother Hubbard	0.1
Nolan	3.6
Sawyers Peak	40.3
Stone Canyon	0.8
Taylor Creek	5.1
The Hub	2.7
Wagon Tongue	3.8
Wahoo Mountain	12.8
Brushy Mountain	0.0
Brushy Springs	0.0
Canyon Creek	0.0
Contiguous To Blue Range Wilderness	0.0
Elk Mountain	0.0
Hells Hole	0.0
Largo	0.0
Poverty Creek	0.0
T Bar	0.0
TOTAL	309.9

Table IRA A11. Miles of ML-1 (Closed Road)¹ other non-motorized travel opportunities

Inventoried Roadless Area	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Apache Mountain	2.2	6.0	6.3	6.3	6.3	6.3
Aspen Mountain	0.2	0.2	5.9	8.0	5.3	5.3
Contiguous To Black and Aldo Leopold Wilderness	0.6	4.3	17.8	21.7	9.4	9.4
Contiguous To Gila Wilderness and Primitive Area	3.9	5.7	22.6	30.9	18.9	19.9
Devils Creek	1.3	2.0	6.2	13.3	4.4	1.3
Eagle Peak	6.3	6.3	6.3	6.8	6.3	6.3
Elk Mountain	0.7	0.7	1.7	4.3	1.4	1.4
Frisco Box	8.4	9.5	11.8	12.0	11.5	11.5
Gila Box	0.9	0.9	2.6	2.6	2.6	2.6
Mother Hubbard	1.4	1.4	2.1	2.1	2.1	2.1
Nolan	4.4	4.4	5.8	6.5	5.1	5.1
Sawyers Peak	0.9	2.7	7.7	9.0	3.4	3.2
Stone Canyon	0.0	6.0	6.4	5.9	6.4	6.4
The Hub	0.2	0.2	1.2	1.2	1.2	1.2
Wagon Tongue	0.3	0.3	2.2	2.6	0.8	0.8
Wahoo Mountain	3.0	10.4	11.0	11.0	10.9	10.9
Brushy Mountain	1.9	1.9	1.9	1.9	1.9	1.9
Largo	2.4	2.4	2.4	2.4	2.4	2.4
1978 Administratively Endorsed Wilderness Proposal	0.0	0.1	0.1	0.1	0.1	0.1
Brushy Springs	0.0	0.0	2.6	3.2	2.6	2.6
Canyon Creek	0.0	0.8	2.4	7.8	1.5	1.5
Contiguous To Blue Range Wilderness	0.0	0.0	0.1	0.1	0.0	0.0
Dry Creek	0.0	1.3	4.5	5.3	2.5	2.5
Hells Hole	0.0	2.0	4.2	4.1	3.9	3.3
Lower San Francisco	0.0	0.2	8.2	11.9	0.6	8.2
Meadow Creek	0.0	0.6	6.1	17.5	4.2	4.5
Poverty Creek	0.0	0.8	0.9	0.9	0.9	0.9
T Bar	0.0	0.0	1.1	1.1	1.1	1.1
Taylor Creek	0.0	0.0	0.4	0.4	0.4	0.4
TOTAL	39.1	71.1	152.5	200.9	117.8	123.0

¹ Includes ML-1 Closed Roads and NM NFS road proposed to be closed to all motor vehicles

Table IRA A12. Miles unauthorized motorized route to maintain as motorized trail inventoried roadless areas

Proposal Code	Proposal Description/Route	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Contiguous To Gila Wilderness and Primitive Area							
CLOSED - ATV - P	Closed NFS road proposed to maintain as NFS trail for motorized vehicles < 50" in width						
	4231 W	0.00	0.54	0.54	0.00	0.54	0.54
2WV - P	NFS trails proposed to maintain as NFS motorized single-track trail (motorcycle)						
	232 (Tadpole Ridge Trail)	0.00	7.47	0.00	0.00	0.00	0.00
	233 (Snow Creek Trail.)	0.00	0.87	0.00	0.00	0.00	0.00
	IRA Miles	0.00	8.88	0.54	0.00	0.54	0.54
Contiguous To Black and Aldo Leopold Wilderness							
ATV - P	Unauthorized proposed route to maintain as NFS trails for motorized vehicles < 50" in width						
	W2	0.00	0.35	0.35	0.00	0.35	0.35
2WV - P	NFS trails proposed to maintain as NFS motorized single-track trail (motorcycle)						
	129 (Gallinas Canyon Trail)	0.00	0.16	0.00	0.00	0.00	0.00
	747 (Rabb Park Trail.)	0.00	7.56	0.00	0.00	0.00	0.00
	IRA Miles	0.00	8.07	0.35	0.00	0.35	0.35
Devils Creek							
CLOSED - ATV - P	Closed NFS road proposed to maintain as NFS trail for motorized vehicles < 50" in width						
	4043 (Boundary)	0.00	0.87	0.00	0.00	0.87	0.87
	IRA Miles	0.00	0.87	0.00	0.00	0.87	0.87
Gila Box							
ATV - P	Unauthorized proposed to maintain as NFS trails for motorized vehicles < 50" in width						
	SC34	0.00	0.52	0.00	0.00	0.52	0.52
	SC53	0.00	0.75	0.00	0.00	0.00	0.00
DECOMM - ATV - P	Decommissioned NFS road proposed to maintain as NFS trail for motorized vehicles < 50" in width						
	4082 (Boundary)	0.00	0.65	0.00	0.00	0.65	0.65
	IRA Miles	0.00	1.91	0.00	0.00	1.17	1.17

Proposal Code	Proposal Description/Route	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Meadow Creek							
2WV - P	NFS trails or unauthorized routes proposed maintain as NFS motorized single-track trail (motorcycle)						
	100 (Allie Canyon Trail.)	0.00	4.02	0.00	0.00	0.00	0.00
	104 (Bear Canyon Trail.)	0.00	3.09	0.00	0.00	0.00	0.00
	55 (Wood Haul Wagon Road Trail)	0.00	2.95	0.00	0.00	0.00	0.00
	SC42 (User Created)	0.00	0.95	0.00	0.00	0.00	0.00
	IRA Miles	0.00	11.01	0.00	0.00	0.00	0.00
Mother Hubbard							
DECOMM - ATV - P	Decommissioned NFS road proposed to maintain as NFS trail for motorized vehicles < 50" in width						
	4039 N (Boundary)	0.00	0.06	0.00	0.00	0.06	0.06
	IRA Miles	0.00	0.06	0.00	0.00	0.06	0.06
Sawyers Peak							
2WV - P	NFS trails proposed to maintain as NFS motorized single-track trail (motorcycle)						
	146 (Grandview Trail.)	0.00	1.95	0.00	0.00	0.00	0.00
	721 (Spring Canyon Trail)	0.00	1.40	0.00	0.00	0.00	0.00
	79 (Black Range Crest Trail)	0.00	5.29	0.00	0.00	0.00	0.00
	IRA Miles	0.00	8.64	0.00	0.00	0.00	0.00
Total Unauthorized Routes - Inventoried Roadless Areas		0.00	1.62	.35	0.00	0.87	0.87
Total Re-Opened Routes		0.00	2.11	.54	0.00	2.11	2.11
Total Non-motorized Trail to Single Track		0.00	34.76	0.00	0.00	0.00	0.00
Total Unauthorized Routes Single Track		0.00	0.95	0.00	0.00	0.00	0.00

Table IRA A13. Primitive, semi-primitive non-motorized, semi-primitive motorized classes of dispersed recreation Continental Divide National Scenic Trail (CDNST) motorized route indicators

Inventoried Roadless Area	CDNST Routes Located within an Inventoried Roadless Area with Proposed Changes	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Meadow Creek	Number of CDNST intersects with a Motorized Road	2	2	1	1	2	2
Gila Box	Miles of CDNST following an open motorized route by IRA	0.9	0.9	0	0	0	0
Wahoo Mountain	Miles of CDNST following an open motorized route by IRA	0.8	0	0	0	0	0
Wagon Tongue	Miles of CDNST following an open motorized route by IRA	0.2	0.2	0	0	0	0
Total Miles of CDNST within IRAs with proposed route changes		2.9	1.0	0	0	0	0

Table IRA A14. Forest Activity Tracking System (FACTS) activities within inventoried roadless areas since 1988

Inventoried Roadless Area	Year and Activity
1978 Administratively Endorsed Wilderness Proposal	
	2006
	Stand Silviculture Prescription
	TSI Need Created- Precommercial Thin - Thin along Pueblo Road, reduce fuel in overstocked stands.
	2009
	Wildfire - Natural Ignition Trigger FRB
Total	
Apache Mountain	
	1996
	Wildlife Habitat Rehabilitate openings
	2012
	Range Cover Manipulation
Total	
Aspen Mountain	
	1988
	Commercial Thin - Timber sale, intermediate cut Aspen/Maness Timber Sale
	Shelterwood Removal Cut (EA/NRH/FH) Aspen/Maness Timber Sale
	1989
	Commercial Thin - Aspen/Maness Timber Sale
	Shelterwood Establishment Cut (with or without leave trees) (EA/RH/NFH) Aspen/Maness Timber Sale
	Shelterwood Removal Cut (EA/NRH/FH) - Aspen/Maness Timber Sale
	1990
	Precommercial Thin- Aspen/Maness Timber Sale
	Stand Silviculture Prescription - Aspen/Maness Timber Sale
	1992
	Precommercial Thin - Aspen/Maness Timber Sale
	TSI Need Created- Precommercial Thin Aspen/Maness Timber Sale -
	1993
	Precommercial Thin - Aspen/Maness Timber Sale
	TSI Need Created- Precommercial Thin - Aspen/Maness Timber Sale
	2005
	Precommercial Thin - TEP Power line Clearance Stage 1
	Special Cut - TEP Power line Clearance Stage 1
	Stand Silviculture Prescription - TEP Power line Clearance Stage 1
	TSI Need Created- Precommercial Thin
	2007
	Burning of Piled Material -
	TEP pile burn Reserve - TEP Power line Clearance Stage 1
	Precommercial Thin - TEP Power line Clearance Stage 1
	TSI Certification - Thinning - TEP Power line Clearance Stage 1

Inventoried Roadless Area	Year and Activity
	TSI Need (precommercial thinning) Eliminated - TEP Power line Clearance Stage 1
	2012
	Range Cover Manipulation - Brush Clearing TEP
Total	
Brushy Springs	
	1995
	Stand Silviculture Prescription - PJ encroachment removal from natural grasslands
	1997
	Wildlife Habitat Precommercial thinning - PJ encroachment removal from natural grasslands
Total	
Canyon Creek	
	1991
	Commercial Thin
	Rearrangement of Fuels
	Shelterwood Removal Cut (EA/NRH/FH)
	1992
	Precommercial Thin
	TSI Need Created- Precommercial Thin
	2007
	Wildland Fire Use - WFU - TEN D6
Total	
Contiguous To Black and Aldo Leopold Wilderness	
	2002
	Stand Silviculture Prescription
	2007
	Wildland Fire Use - Lake WFU and Granite WFU
	2008
	Range Cover Manipulation
	2010
	Burning of Piled Material - Unit 5 Piles
	Underburn - Low Intensity (Majority of Unit) - Powderhorn Unit 2&3
Total	
Contiguous To Blue Range Wilderness	
	2005
	Precommercial Thin
	Special Cut - TEP powerline clearance stage 1
	TSI Need Created- Precommercial Thin- TEP power line clearance stage 1
Total	
Contiguous To Gila Wilderness and Primitive Area	
	2006
	Commercial Thin/

Inventoried Roadless Area	Year and Activity
	Precommercial Thin
	Reforestation Need Created by Fire
	Sanitation (salvage) Along Bursum Road, Hazard tree removal -
	Stand Silviculture Prescription
	TSI Need Created- Precommercial Thin
	2007
	Precommercial Thin
	Salvage Cut (intermediate treatment, not regeneration) - along Bursum Road, Hazard tree removal - Be
	Thinning for Hazardous Fuels Reduction – Sheep Corral
	2008
	Precommercial Thin
	TSI Certification - Thinning
	(blank)
	2009
	Broadcast Burning - Covers a majority of the unit Jaybird Canyon Rx Fire
	Invasives - Pesticide Application
	Range Control Vegetation
	Range Cover Manipulation
	Wildfire - Natural Ignition – Trigger FRB
	Wildland Fire Use
	Meason Wildland Fire
	Moore Wildland Fire
	2011
	Broadcast Burning - Covers a majority of the unit
	Mill/Scott Rx
Total	
Devils Creek	
	1988
	Broadcast Burning - Covers a majority of the unit - Devils park RX burn
	1989
	Broadcast Burning - Covers a majority of the unit - Devils park RX burn
	2001
	Thinning for Hazardous Fuels Reduction
	2005
	Stand Silviculture Prescription
	Wildlife Habitat Rehabilitate openings
	Wildlife Habitat Slash treatment
	2006
	Reforestation Need Created by Fire
	Stand Silviculture Prescription
	TSI Need Created- Precommercial Thin

Inventoried Roadless Area	Year and Activity
	2007
	Broadcast Burning - Covers a majority of the unit
	Sheep Basin 2007 Rx Target
	Burning of Piled Material
	Five Bar / Rancho G rx piles
	Stand Silviculture Prescription
	TSI Need Created- Precommercial Thin
	Underburn - Low Intensity (Majority of Unit) Martinez Fire
	2009
	Broadcast Burning - Covers a majority of the unit UNIT 1 (FY 09)
	Range Control Vegetation
	Range Cover Manipulation
	Wildland Fire Use- Resource Benefit-Willow-D6
	2010
	Horse Shoe hand piles
	Timber Sale 2009
	Range Control Vegetation Tieta & Lawn Tank Cleaning
	2011
	Burning of Piled Material -Timber Sale 2009 re-pile
	2012
	Burning of Piled Material/Timber Sale tractor piles
	Precommercial Thin/2012 Reserve WUI TSI
	Range Fences – Area WWB fire fence rehab need
	Reforestation Need Created by Fire
	White Water Baldy Refor Need
	TSI Certification – Thinning - 2012 Reserve WUI TSI
Total	
Dry Creek	
	1997
	Watershed Resource Non-Structural Improvements Erosion Cont
	2006
	Precommercial Thin
	TSI Need Created- Precommercial Thin
	2008
	Wildland Fire Use/Road WFU 08
	2009
	Range Cover Manipulation
	Range Fences - Area
	2010
	Precommercial Thin/ Area 74 TSI
	Range Fences - Area

Inventoried Roadless Area	Year and Activity
	TSI Certification - Thinning
	Underburn - Low Intensity (Majority of Unit)
	Area 74 units 9 and 10
	Wildlife Habitat Prescribed fire
	Area 74 units 9 and 10
Total	
Eagle Peak	
	1989
	Shelterwood Removal Cut (EA/NRH/FH)
	1990
	TSI Need Created- Precommercial Thin
	1991
	Sanitation (salvage)
	Shelterwood Establishment Cut (with or without leave trees) (EA/RH/NFH)
	Shelterwood Removal Cut (EA/NRH/FH)
	TSI Need Created- Precommercial Thin
	1992
	Sanitation (salvage)
	Shelterwood Removal Cut (EA/NRH/FH)
	1993
	Precommercial Thin
	TSI Need Created- Precommercial Thin
	2000
	Stand Silviculture Prescription
Total	
Elk Mountain	
	1989
	Sanitation (salvage)
	Shelterwood Removal Cut (EA/NRH/FH)
	2007
	Wildland Fire Use WFU - HL D6
Total	
Frisco Box	
	1989
	Certification-Planted
	Stocking Survey
	1990 -H-V TS
	Commercial Thin
	Improvement Cut
	Overstory Removal Cut (from advanced regeneration) (EA/RH/FH)
	Shelterwood Establishment Cut (with or without leave trees) (EA/RH/NFH)

Inventoried Roadless Area	Year and Activity
	Shelterwood Removal Cut (EA/NRH/FH)
	TSI Need Created- Precommercial Thin
	1992 - H-V TS
	Reforestation Need created by Regeneration Failure
	TSI Need Created- Precommercial Thin -
	1994 - H-V TS
	Precommercial Thin
	1995 -H-V TS
	Stand Silviculture Prescription
	1996 -H-V TS
	Certification of Natural Regeneration with Site Prep
	TSI Need Created- Precommercial Thin
	1998 – H-V TS
	Commercial Thin
	Group Selection Cut (UA/RH/FH)
	Precommercial Thin
	Sanitation Cut
	2004
	TSI Need Created- Precommercial Thin
	2005
	Special Cut – TEP Power line
	Stand Silviculture Prescription
	Wildlife Habitat Rehabilitate openings
	Wildlife Habitat Slash treatment
	2006
	Underburn - Low Intensity (Majority of Unit) Centerfire Freeman
	2009
	Wildland Fire Use Joshua AMR
	2011
	Underburn - Low Intensity (Majority of Unit) East Centerfire Rx Unit
	2012
	Broadcast Burning - Covers a majority of the unit
Total	
Gila Box	
	2006
	Invasives - Mechanical /Physical
Largo	
	1996
	Tree Encroachment Control – Cutting small PJ's out of grassland
	1997
	Tree Encroachment Control – Cutting small PJ's out of grassland

Inventoried Roadless Area	Year and Activity
	2006
	Precommercial Thin
	Stand Silviculture Prescription
	TSI Need Created- Precommercial Thin
Total	
Lower San Francisco	
	2005
	Special Cut – TEP Power line Clearance
Meadow Creek	
	2002
	Stand Silviculture Prescription
	2003
	Piling of Fuels, Hand or Machine
	Thinning for Hazardous Fuels Reduction
	2009
	Broadcast Burning - Covers a majority of the unit Jaybird Canyon Rx Fire
	Wildfire - Fuels Benefit Hightower FRB
	Wildfire - Natural Ignition Allie FRB
	2010
	Broadcast Burning - Covers a majority of the unit Signal Peak North RX
	2012
	Thinning for Hazardous Fuels Reduction
Total	
Mother Hubbard	
	1991
	Stand Silviculture Prescription - Swapp Booth TS - all on NE edge of IRA
	1993 - Swapp Booth TS - all on NE edge of IRA
	Commercial Thin
	Sanitation (salvage)
	Shelterwood Removal Cut (EA/NRH/FH)
	Special Cut
	1995 -
	TSI Need Created- Precommercial Thin - Swapp Booth TS
	1996
	TSI Need Created- Precommercial Thin - Swapp Booth TS
	1997
	Precommercial Thin - Swapp Booth TS -
	1998
	Burning of Piled Material
	Precommercial Thin
	1999

Inventoried Roadless Area	Year and Activity
	Fuel Inventory - WUI around private land
	2004
	Reforestation Need Created by Harvest
	2005
	Reforestation Need Change due to Stocking Changes
Total	
Nolan	
	1988 – Aspen Manness TS
	Commercial Thin
	Shelterwood Removal Cut (EA/NRH/FH)
	1989 – Aspen Manness TS
	Precommercial Thin
	Sanitation (salvage)
	Shelterwood Removal Cut (EA/NRH/FH)
	1990 - Aspen Manness TS
	Precommercial Thin
	Stand Silviculture Prescription
	1992 - Aspen Manness TS
	TSI Need Created- Precommercial Thin
	1998
	Wildlife habitat inventory
	2005
	Stand Silviculture Prescription
	TSI Need Created- Precommercial Thin
	2007
	Precommercial Thin
	TSI Certification - Thinning
	TSI Need (precommercial thinning) Eliminated
	2012
	Range Cover Manipulation
Total	
Poverty Creek	
	2006
	Precommercial Thin
	TSI Need Created- Precommercial Thin
	2008
	Thinning for Hazardous Fuels Reduction CFRP-Gila NF Permittee Assoc
	2009
	Range Fences - Area
	2010
	Range Fences - Area

Inventoried Roadless Area	Year and Activity
Total	
Taylor Creek	
	2009
	Wildfire - Natural Ignition Diamond Wildland Fire
	2010
	Invasives - Pesticide Application
	2011
	Broadcast Burning - Covers a majority of the unit
	2012
	Invasives - Pesticide Application
Total	
The Hub	
	1990
	Shelterwood Establishment Cut (with or without leave trees) (EA/RH/NFH) Thinning PJ understory
	1992
	Site Preparation for Natural Regeneration - Burning
Total	
Wagon Tongue	
	2003
	Thinning for Hazardous Fuels Reduction
	Wildlife Habitat Precommercial thinning
	2004
	Reforestation Need Created by Harvest
	2005
	Reforestation Need Change due to Stocking Changes TSI Need Created- Precommercial Thin
	2007
	Burning of Piled Material Aragon rx piles
Total	
Wahoo Mountain	
	2007
	Burning of Piled Material
	Poverty Creek pile/broadcast burn
	2008
	Range Cover Manipulation
Total	
Grand Total Inventoried Roadless Areas	

Appendix B. Hell Hole and Lower San Francisco Wilderness Study Area Information

[Table WSA B1 - Motorized Route Designation by Definition](#)

[Table WSA B2 – Hell Hole WSA Miles of Motorized Routes by Alternative](#)

[Table WSA B3 – Lower San Francisco WSA Miles of Motorized Routes by Alternative](#)

[Table WSA B4 -- Miles of Motorized and Maintenance Level 1 \(ML-1\)](#)

[Table WSA B5 – Miles Unauthorized Motorized Route Additions – Lower San Francisco WSA](#)

[Table WSA B6 - Miles and Acres of Corridors for Motorized Dispersed Camping](#)

[Table WSA B7 - Miles and Acres of Corridors for Motorized Big Game Retrieval](#)

[Table WSA B8 – FACTS Past Activities within WSAs](#)

Table WSA B1. Motorized route designation by definition - Hell Hole Wilderness Study Area and Lower San Francisco Wilderness Study Area

Proposal Code	Description	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Motorized Route Designation – Hell Hole Wilderness Study Area							
M	NFS road to remain open to all motor vehicle types	10.40	5.40	2.10	3.70	1.80	4.10
SP	Change use of existing NFS roads to open for periodic administrative use or by written authorization only	0.00	3.00	4.19	2.58	4.76	3.00
COUNTY	Road under County (Catron, Grant, Hidalgo, or Sierra) jurisdiction	0.01	0.01	0.01	0.01	0.01	0.01
SH - State Highway	Highway under State jurisdiction	0.28	0.28	0.28	0.28	0.28	0.28
Total Motorized Routes		10.70	8.70	6.60	6.60	6.80	7.40
Motorized Route Designation by Definition - Lower San Francisco Wilderness Study Area							
M	NFS road to remain open to all motor vehicle types	8.20	8.00	0.40	0.00	8.00	0.40
M - P	Unauthorized route proposed to maintain as NFS roads and open to all vehicle types	0.00	0.00	0.30	0.00	0.0	0.30
Total Motorized Routes		8.20	8.00	0.70	0.00	8.00	0.70

Table WSA B2. Hell Hole Wilderness Study Area motorized route miles route by alternative

Hell Hole Wilderness Study Area Route Miles	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Total Route Miles	10.75	10.75	10.75	10.75	10.75	10.75
Road 4075 P						
M	0.41	0.41	0.00	0.00	0.00	0.00
NM	0.00	0.00	0.41	0.41	0.41	0.41
Road 4075 R						
M	0.35	0.35	0.00	0.06	0.29	0.29
NM	0.00	0.00	0.35	0.29	0.06	0.06
Road 4075 U						
M	0.67	0.04	0.04	0.04	0.04	0.04
NM	0.00	0.64	0.64	0.64	0.64	0.64
Road 4075 X						
M	1.42	0.20	0.20	0.20	0.20	0.20
NM	0.00	1.22	1.22	1.22	1.22	1.22
Road 4076 Q						
M	0.34	0.34	0.00	0.00	0.00	0.00
NM	0.00	0.00	0.34	0.34	0.34	0.34
Road 4076 R						
M	1.17	1.17	1.17	1.17	1.17	1.17
Road 4235 D						
M	0.56	0.56	0.56	0.00	0.00	0.56
SP	0.00	0.00	0.00	0.56	0.56	0.00
Road 4235 G						
M	1.19	1.19	0.00	0.00	0.00	1.19
SP	0.00	0.00	1.19	1.19	1.19	0.00
Road 4236 G						
M	0.53	0.53	0.00	0.00	0.00	0.53
NM	0.00	0.00	0.53	0.53	0.53	0.00
Road 4236 H						
M	0.14	0.14	0.14	0.14	0.14	0.14

Hell Hole Wilderness Study Area Route Miles	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Road 4236 I						
M	0.25	0.25	0.00	0.00	0.00	0.00
NM	0.00	0.00	0.25	0.25	0.25	0.25
Road 4236 J						
M	0.29	0.29	0.00	0.00	0.00	0.00
NM	0.00	0.00	0.29	0.29	0.29	0.29
Road 4236 K						
M	0.12	0.00	0.00	0.00	0.00	0.00
NM	0.00	0.12	0.12	0.12	0.12	0.12
Road 8345						
M	3.00	0.00	0.00	2.18	0.00	0.00
SP	0.00	3.00	3.00	0.82	3.00	3.00
GNT-5-12						
COUNTY (Boundary)	0.01	0.01	0.01	0.01	0.01	0.01
NM-78						
SH - State Highway (Boundary)	0.28	0.28	0.28	0.28	0.28	0.28

M =NFS Road to remain open to the public

NM=NFS roads proposed to be closed to all motorized vehicle uses

SP=Change use of existing NFS roads to open for periodic administrative use or by written authorization only

Table WSA B3. Lower San Francisco Wilderness Study Area motorized route miles route by alternative

Lower San Francisco Wilderness Study Area Route Miles	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
Total Route Miles	8.57	8.57	8.57	8.57	8.57	8.57
Road 4223 L						
M	7.98	7.98	0.39	0.00	7.98	0.39
NM	0.00	0.00	7.59	7.98	0.00	7.59
Road 68						
M	0.29	0.09	0.09	0.00	0.09	0.09
NM	0.00	0.21	0.21	0.29	0.21	0.21
GPR-14						
M - P	0.00	0.00	0.09	0.00	0.00	0.09
NM - P	0.00	0.09	0.00	0.09	0.09	0.00
Not Applicable	0.09	0.00	0.00	0.00	0.00	0.00
GPR-15						
M - P	0.00	0.00	0.12	0.00	0.00	0.12
NM - P	0.00	0.12	0.00	0.12	0.12	0.00
Not Applicable	0.12	0.00	0.00	0.00	0.00	0.00
GPR-16						
M - P	0.00	0.00	0.09	0.00	0.00	0.09
NM - P	0.00	0.09	0.00	0.09	0.09	0.00
Not Applicable	0.09	0.00	0.00	0.00	0.00	0.00

M =NFS Road to remain open to the public

NM=NFS roads proposed to be closed to all motorized vehicle uses

SP=Change use of existing NFS roads to open for periodic administrative use
or by written authorization only

M-P=Unauthorized route proposed to be maintained as NFS roads and open to all vehicle types

NM-P=Unauthorized route proposed not to be maintained as NFS roads and open to all vehicle types

GPR= Glenwood Proposed Route

Table WSA B4. Miles of motorized and maintenance level 1 (ML-1) closed roads by wilderness study area

Wilderness Study Area	Alt B Roads ¹ M	Alt B Roads ML-1	Alt B Roads Admin Permit	Alt C Roads M	Alt C Roads ML1-Closed	Alt C Roads Admin Permit	Alt D Roads M	Alt D Roads ML-1-	Alt D Roads Admin-Permit	Alt E Roads M	Alt E Roads ML1-Closed	Alt E Roads Admin Permit	Alt F Roads M	Alt F Roads ML-1 Closed	Alt F Roads Admin Permit	Alt G Roads M	Alt G Roads ML-1 Closed	Alt G Roads Admin Permit
Hell Hole	10.7	0.0	0.0	5.7	1.9	3.0	2.4	4.1	4.1	4.0	4.0	2.5	2.1	3.8	4.7	4.4	3.3	3.0
Lower San Francisco	8.2	0.0	0.0	8.07	0.2	0.0	0.7	7.8	0.0	0.0	8.2	0.0	8.0	0.2	0.0	0.7	7.8	0.0
TOTAL	19.0	0.0	0.0	13.8	2.1	3.0	3.1	11.9	4.1	4.0	12.3	2.5	10.2	4.0	4.7	5.1	11.1	3.0

1M – NFS Road to remain open to all vehicles; ML-1 Maintenance Level 1 – Closed Road; Administrative Permit – NFS Road for periodic administrative use or by written authorization only

Table WSA B5. Unauthorized motorized route additions (miles) – Lower San Francisco Wilderness Study Area by alternative

Proposal Code	Proposal Description/Route	Alt B	Alt C	Alt D	Alt E	Alt F	Alt G
M-P	GPR-14	0.0	0.0	0.1	0.0	0.0	0.1
M-P	GPR-15	0.0	0.0	0.1	0.0	0.0	0.1
M-P	GPR-16	0.0	0.0	0.1	0.0	0.0	0.1
Total Unauthorized Routes	0.0	0.0	0.3	0.0	0.0	0.3	

M-P - Unauthorized route proposed to maintain as NFS roads and open to all vehicle types; GPR=Glenwood Proposed Routes

Table WSA B6. Miles and acres of corridors for motorized dispersed camping by wilderness study area and alternative

Wilderness Study Area	Total Wilderness Study Area Acres	Alt B Miles	Alt B Acres	Alt C Miles	Alt C Acres	Alt D Miles	Alt D Acres	Alt E Miles	Alt E Acres	Alt F Miles	Alt F Acres	Alt G Miles	Alt G Acres
Hell Hole	19,543	N/A	19,540.15	1.40	114.14	0.23	21.71	0.00	0.00	0.26	29.02	0.23	21.71
Lower San Francisco	7,132	N/A	4,144.41	8.07	580.25	0.00	0.27	0.00	0.00	0.48	37.68	0.00	0.27
TOTAL	26,675	N/A	23,684.57	9.47	694.39	0.23	21.97	0.00	0.00	0.74	66.70	0.23	21.97

Table WSA B7. Miles and acres of corridors for motorized big game retrieval by wilderness study area and alternative

Wilderness Study Area	Wilderness Study Area Acres	Alt B miles	Alt B acres	Alt C miles	Alt C acres	Alt D miles	Alt D acres	Alt E miles	Alt E acres	Alt F miles	Alt F acres	Alt G miles	Alt G acres
Hell Hole	19,543	N/A	19,540.15	5.77	9,777.08	0.23	21.71	0.00	0.00	2.13	3,818.88	0.23	21.71
Lower San Francisco	7,132	N/A	4,144.41	8.07	4,062.70	0.00	0.27	0.00	0.00	8.07	3,328.91	0.00	0.27
Total	26,675	N/A	23,684.57	13.84	13,839.78	0.23	21.97	0.00	0.00	10.20	7,147.80	0.23	21.97

Note:

Alternative B – No action

Alternative C – 1 mile each side from any designated road

Alternative D – 300 feet, using same motorized dispersed camping corridor

Alternative E – No miles or acres of motorized corridors for motorized big game retrieval

Alternative F – ½ mile each side from any designated road

Alternative G – 300 feet, using same motorized dispersed camping corridor

Table WSA B8. Forest Activity Tracking System (FACTS) Activities within wilderness study areas since 1988

Row Labels	Wilderness Study Area FACTS Acres
Hell Hole Wilderness Study Area	
2007	
Thinning for Hazardous Fuels Reduction Pine Cienega WUI	0.8
Lower San Francisco Wilderness Study Area	
2005	
Special Cut	718.4
Grand Total Wilderness Study Areas	719.2